PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

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SUPPLEMENTAL DATA TO PHOTOFACT FOLDER 6 SET #125

Sets Coded Triangle 1, 2 or 3	Production changes on Emerson Models 662B and 663B (Ch. 120127B and 120128B) coded Triangle 1, 2, or 3 were covered in Photofact Folder 6 Set. 125. In sets coded triangle 3, pin 2 of V4 is disconnected from ground and R25 (100Ω) is connected to the cathode at pin 2 and there were no connections to pin 7.
Sets Coded Triangle 4	R25, connected from pin 2 of V4 to ground, was changed to 330Ω. C21 was connected from pin 2 of V4 to ground.
Sets Coded Triangle 5	A 10KΩ resistor was added across C42 to improve vertical sync stability.
Sets Coded Triangle 6	The following changes were incorporated to reduce picture carrier beats on channel 5. C22, 1500MMF ceramic capacitor, was moved from the common ground connection near V5 to the common ground connection near V6. C29 was removed from its original location and reconnected from pin 2 of V8 to chassis between the power transfromer to chassis. A 5000MMF ceramic capacitor was added from pin 6 of V7 to the common ground connection near the tube socket. The AC wires from the switch were anchored to the wall of the chassis near bottom edge adjacent to chassis mounting feet. A shield was placed over the 6AL5 video detector tube (V6).

SERVICE HINT: Removal of neck shadows on picture tube.

In some rare instances, it may be impossible to remove neck shadows from the right side of the picture tube. If proper adjustment of the ion trap (maximum brightness), focus coil and deflection yoke (yoke pushed forward so that front of coil rests against the picture tube), does not eliminate the shadow the following procedure should remedy this condition.

1. Reverse connections to the focus coil making sure the picture tube is properly centered in the deflection yoke and focus coil.
2. If step #1 does not remedy this condition then magnetize the moulded iron core by the following method.
   (a) Remove V17 (6BG6), V19 (1B3) and V18 (6W4) from their sockets.
   (b) Remove white lead from horizontal deflection yoke at width coil and connect to †215VDC.
   (c) Connect the negative lead of a 40MFD at 450V electrolytic capacitor to chassis.
   (d) With set operating momentarily touch the positive side of this electrolytic to pin 3 of the 6W4 (V18) damper tube socket.
   (e) Remove the 40MFD at 450 volt electrolytic from set making sure to first discharge the positive terminal to chassis to avoid chance of shock.
   (f) Replace tube and reconnect yoke lead.

If shadow persists repeat above procedure. In stubborn cases the fault may lie in the deflection yoke or picture tube. Replacing either of these items should then eliminate the trouble.

EMERSON MODELS 662B, 663B
(Ch. 120127B, 120128B)

PRODUCTION CHANGES
BULLETIN 18

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

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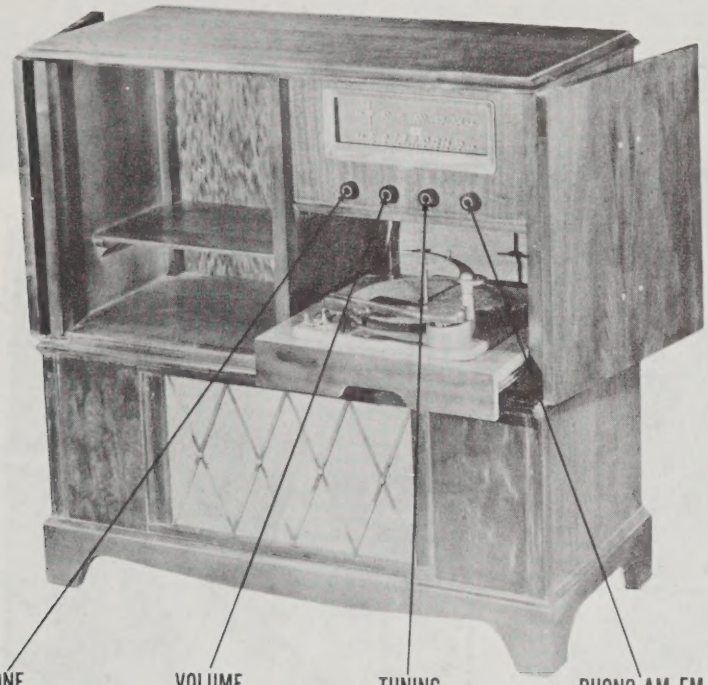
AIRLINE
MODEL 15WG-2745C

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

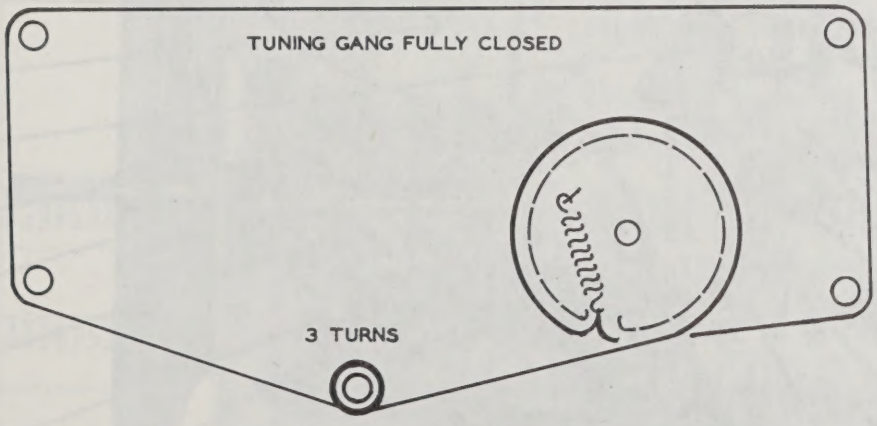


AIRLINE
MODEL 15WG-2745C

AIRLINE
MODEL 15WG-2745C

TRADE NAME	Airline, Model 15WG-2745C
SUPPLIER	Montgomery Ward & Co., 619 Chicago Ave., Chicago, Illinois
TYPE SET	AC Operated Combination Phono - Radio, AM-FM Superheterodyne Receiver with Loop Ant.
TUBES (TEN)	Types 6BA6 RF Amp., 12AT7 Converter, 6BA6 1st IF Amp., 6BA6 2nd FM IF Amp., 6AL5 Ratio Det., 6AV6 Det.-AVC-AF, 6AV6 Phase Inverter, (2) 6K6GT Power Output, 5Y3GT Rectifier
POWER SUPPLY	105-125 Volts AC — RATING .725 Amp. @ 117 Volts AC
TUNING RANGE—BROADCAST	540-1600KC — FREQ. MOD. 88-108 MC

RECORD CHANGER -- WEBSTER-CHICAGO MODEL 100



DIAL CORD DRIVE

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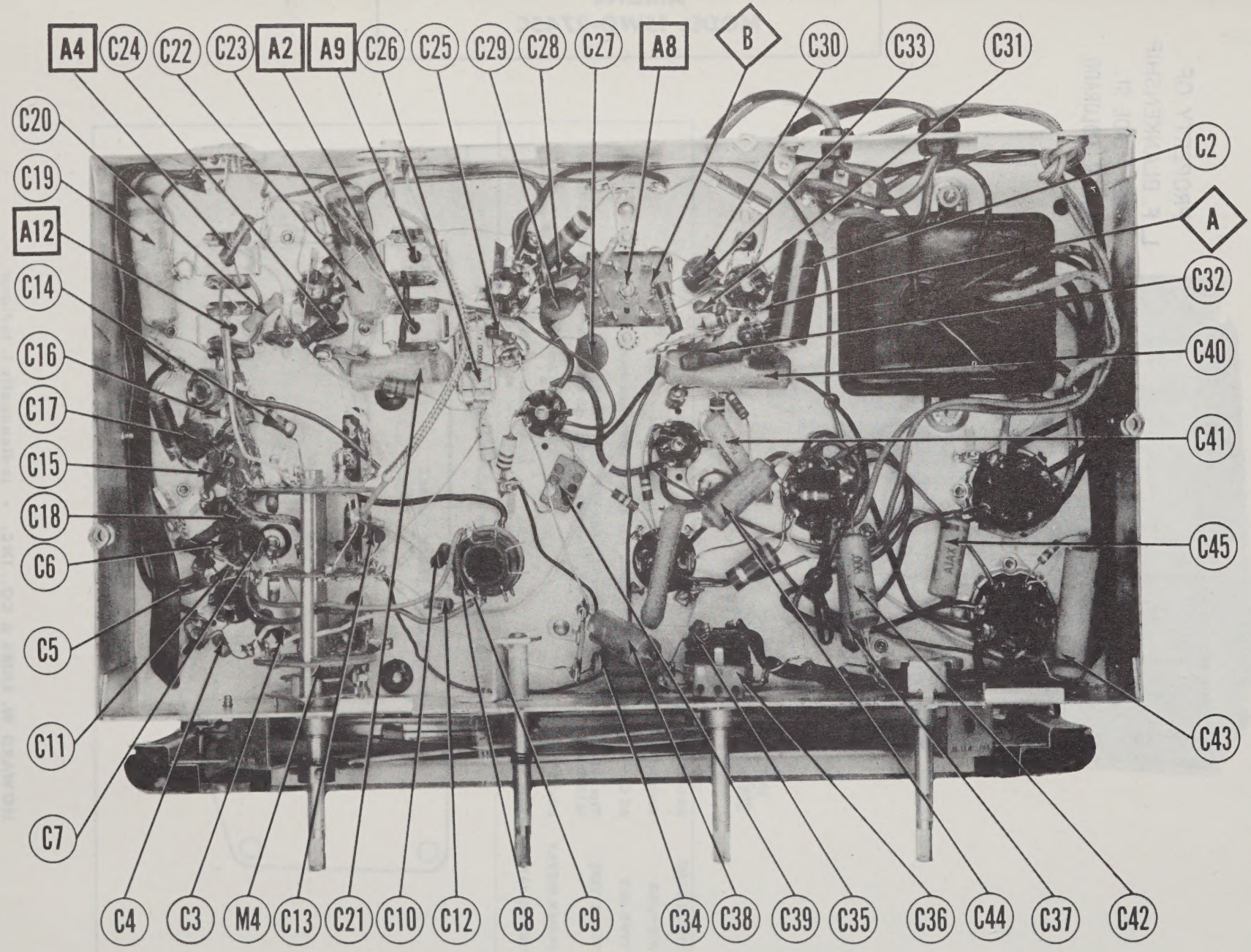
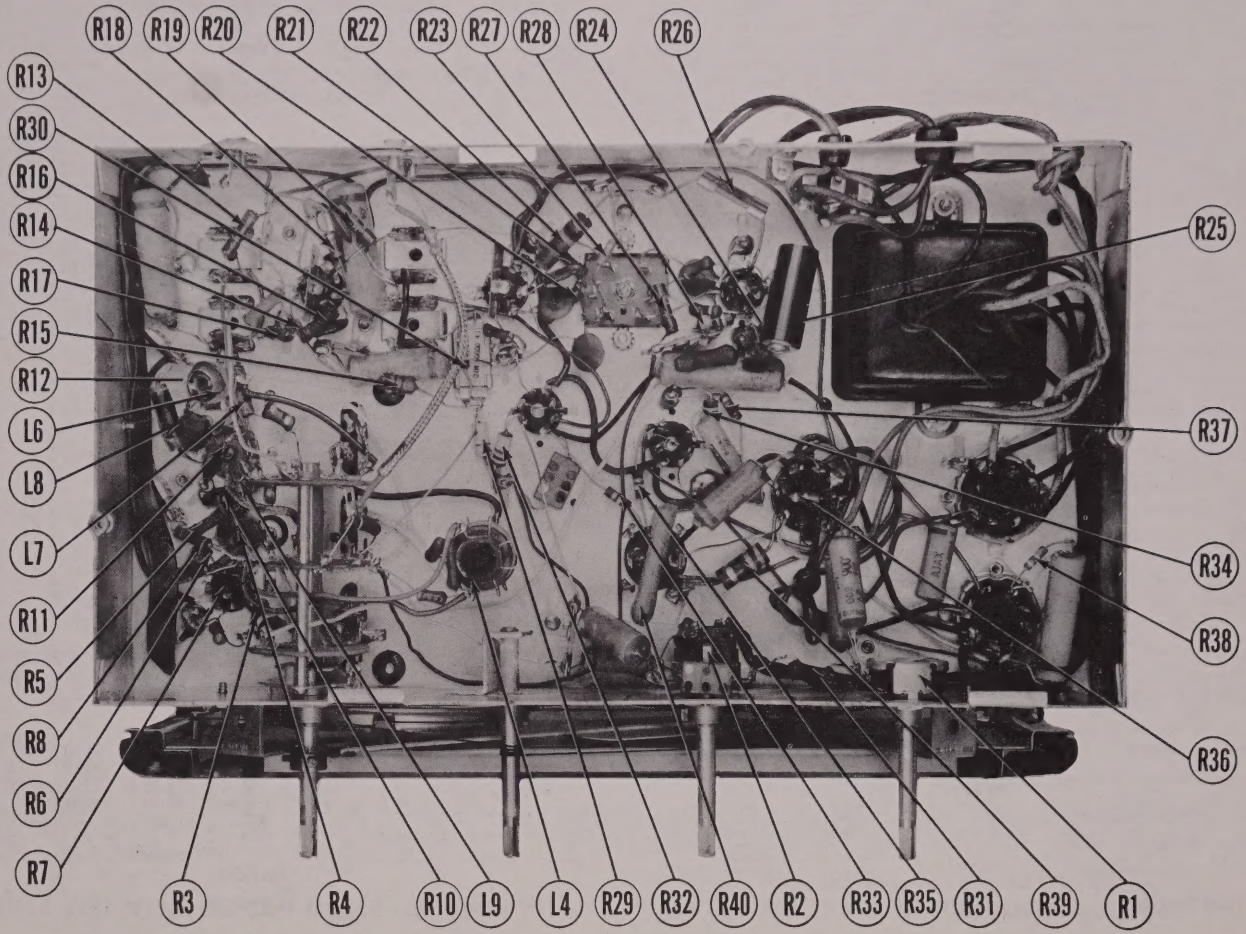

A4
C24
C22
C23
A2
A9
C26
C25
C29
C28
C27
A8
B
C30
C33
C31
C20
C19
A12
C14
C16
C17
C15
C18
C6
C5
C11
C7
C2
A
C32
C40
C41
C45
C43
C4
C3
M4
C13
C21
C10
C12
C8
C9
C34
C38
C39
C35
C36
C44
C37
C42


R18
R19
R20
R21
R22
R23
R27
R28
R24
R26
R13
R30
R16
R14
R17
R15
R12
L6
L8
L7
R11
R5
R8
R6
R7
R25
R37
R34
R38
R36
R3
R4
R10
L9
L4
R29
R32
R40
R2
R33
R35
R31
R39
R1

AM ALIGNMENT

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Loop should be maintained in same relative position to chassis as when receiver is in cabinet.
Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1Mfd.	High side to pin 7 (Grid) of 12AT7 (V2) Low side to chassis.	455KC (400% Mod)	AM (center)	Tuning gang fully open.	Across voice coil	A1, A2 A3, A4	Adjust for maximum output.
2.		Loop	1620KC	"	"	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.		Loop	1400KC	"	Tune for max. output.	"	A6, A7	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output. Set pointer to 1400 on AM dial scale.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
4.	.01Mfd	High side to pin 1 (Grid) of 6BA6 (V3) Low side to chassis	10.7MC (unmod.)	FM (CW)	Tuning gang fully open	DC probe to point Ⓐ. Common to chassis.	A8, A9, A10	Adjust for maximum deflection. Connect a 1000Ω resistor across secondary of L13 while adjusting A10.
5.	"	High side to pin 7 (Grid) of 12AT7 (V2) Low side to chassis	"	"	"	"	A11, A12	Adjust for maximum deflection.
6.	"	"	"	"	"	DC probe point Ⓑ. Common to chassis.	A13	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120% sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
4.	.01Mfd	High side to pin 1 (Grid) of 6BA6 (V3) Low side to chassis	10.7MC (450KC swp)	FM (CW)	Point of non-interference.	Vert. amp to point Ⓐ. Low side to chassis.	A8, A9, A10	Disconnect stabilizor capacitor C2. Adjust for maximum amplitude & symmetry as per fig.1
5.	"	High side to pin 7 (Grid) of 12AT7 (V2) Low side to chassis	"	"	"	"	A11, A12	"
6.	"	"	"	"	"	Vert. amp to point Ⓑ. Low side to chassis	A13	Reconnect capacitor C2. Adjust A13 so 10.7MC occurs at center of crossover lines as per fig.2 SLIGHTLY retouch A8 for maximum amplitude & straightness of crossover lines.

FM RF ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
7.	300Ω carbon resistor	High side thru 300Ω to ungrounded FM ant. terminal.	108.4MC (unmod.)	FM	Tuning gang fully open.	DC probe to point Ⓐ. Common to chassis.	A14	Adjust for maximum deflection.
8.	"	"	104.5MC (unmod.)	"	Tune for max. deflection	"	A15, A16	"

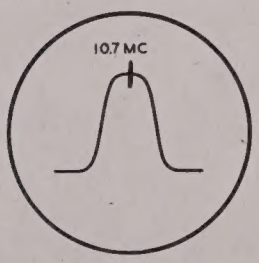


FIG. 1

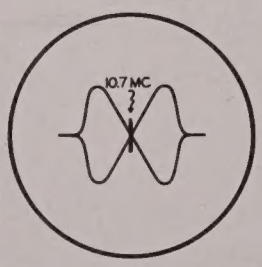
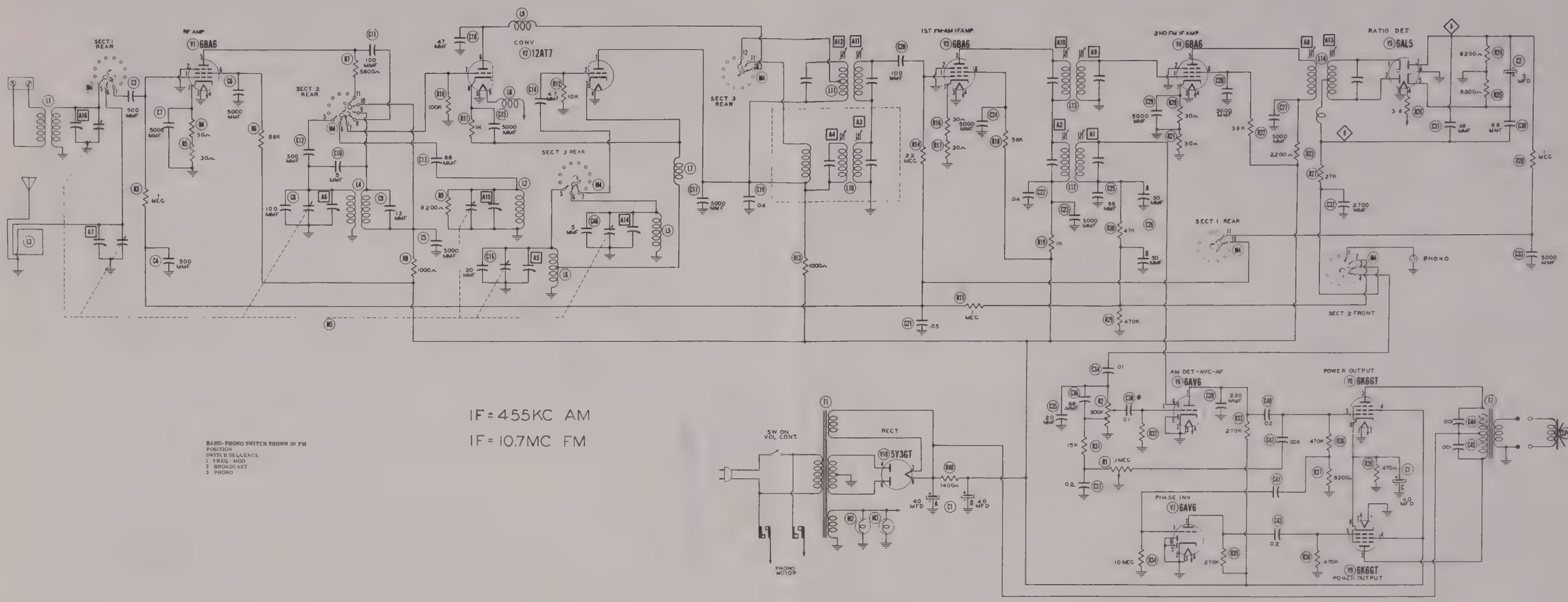


FIG. 2



IF = 455KC AM

IF = 10.7MC FM

BAND-PHONO SWITCH SHOWN IN FM POSITION
SWITCH SEQUENCE
1 FREQ MOD
2 BROADCAST
3 PHONO

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BA6	-.2VDC	0V	0V	6.3VAC	180VDC	75VDC	6VDC		
V 2	12AT7	215VDC	0V ‡F-4.2VDC ▲8-6VDC	0V	0V	0V	215VDC	0V	‡3.4VDC ▲4VDC	6.1VAC
V 3	6BA6	-.2VDC	0V	0V	6.3VAC	220VDC	75VDC	.6VDC		
V 4	6BA6	0V	0V	0V	6.3VAC	210VDC	80VDC	.6VDC		
V 5	6AL5	‡.1VDC	‡.1VDC	0V	5.2VAC	‡.1VDC	0V	‡-.1VDC		
V 6	6AV6	-.5VDC	0V	0V	6.3VAC	0V	-.3VDC	80VDC		
V 7	6AV6	-.8VDC	0V	0V	6.3VAC	0V	0V	80VDC		
V 8	6K6GT	0V	6.3VAC	390VDC	330VDC	0V	0V	0V	18VDC	
V 9	6K6GT	80VDC	6.3VAC	390VDC	330VDC	0V	0V	0V	18VDC	
V 10	5Y3GT	0V	305VDC	0V	310VAC	0V	310VAC	0V	305VDC	

‡ TAKEN WITH VACUUM TUBE VOLTMETER

‡ TAKEN IN FM POSITION
▲ TAKEN IN AM POSITION

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BA6	‡1.6Meg ▲2.5Meg	0Ω	0Ω	1Ω	18KΩ	†57KΩ	68Ω		
V 2	12AT7	12.4KΩ	10KΩ	2.8Ω	0Ω	0Ω	12.4KΩ	100KΩ	1KΩ	.6Ω
V 3	6BA6	‡2.5Meg ▲2.7Meg	0Ω	0Ω	1Ω	†2.4KΩ	†57KΩ	68Ω		
V 4	6BA6	.4Ω	0Ω	0Ω	1Ω	†3.6KΩ	†40KΩ	68Ω		
V 5	6AL5	Inf.	Inf.	0Ω	1.9Ω	8.2KΩ	0Ω	6.2KΩ		
V 6	6AV6	10Meg	0Ω	0Ω	1Ω	0Ω	‡430KΩ ▲520KΩ	†270KΩ		
V 7	6AV6	10Meg	0Ω	0Ω	1Ω	0Ω	0Ω	†270KΩ		
V 8	6K6GT	8.2KΩ	.1Ω	†250Ω	†1.4KΩ	478KΩ	.4Ω	0Ω	470Ω	
V 9	6K6GT	†270KΩ	.1Ω	†250Ω	†1.4KΩ	470KΩ	Inf.	0Ω	470Ω	
V 10	5Y3GT	Inf.	30KΩ	Inf.	130Ω	Inf.	130Ω	Inf	30KΩ	

† MEASURED FROM PIN 8 OF V10

THE COOPERATION OF THE MANUFACTURER OF THIS
RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	AIRLINE PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R1A	3Meg	½	40X285	Q13-140	AM-67-Z	AN-76	Tone Control
B	Shaft		Not Req	Not Req	KSS-3	AK-1	Attach to R1A per instructions
R2A	500KΩ	½	36X383	Q13-133X	AK-80	BTSK-66-S	Volume Control - Tapped
B	Shaft		Not Req	Not Req	KSS-3	Not Req	Attach to R2A per instructions
C	Switch		Not Req	76-1	SWB	Not Req	Attach to R2A per instructions

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	AIRLINE PART No.	IRC PART No.	
R3	1Meg	½	B85105	BTS-1Meg	AVC Network
R4	30Ω	½			RF Amp. Cathode } See Note 1
R5	30Ω	½			RF Amp. Cathode }
R6	56KΩ	½	B84563	BTS-56K	RF Amp. Screen
R7	5600Ω	½	B84562		RF Amp. Plate
R8	1000Ω	½	B84102	BTS-1000	RF Amp. Decoupling
R9	8200Ω	½	B84822		RF Coil Shunt - See Note 4
R10	100KΩ	½	B85104		Mixer Grid
R11	1000Ω	½	B84102	BTS-1000	Mixer Cathode
R12	10KΩ	½	B84103		Osc. Grid
R13	1000Ω	½	B84102	BTS-1000	Decoupling
R14	2.2Meg	½	B85225	BTS-2.2Meg	AVC Network
R15	1Meg	½	B85105	BTS-1Meg	AVC Network
R16	30Ω	½			1st IF Amp. Cathode } See Note 2
R17	30Ω	½			1st IFAmp. Cathode }
R18	56KΩ	½	B84563		1st IF Amp. Screen
R19	1000Ω	½	B84102	BTS-1000	1st IF Amp. Plate Decoupling
R20	30Ω	½			2nd FM IF Amp. Cathode } See Note 3
R21	30Ω	½			2nd FM IF Amp. Cathode }
R22	39KΩ	1	C84393	BTA-39K	2nd FM IF Amp. Screen
R23	2200Ω	½	B85222	BTS-2200	2nd FM IF Amp. Plate Decoupling
R24	8200Ω	½	B84822	BTS-8200	Ratio Det. Diode Load - See Note 4
R25	8200Ω	½	B84822	BTS-8200	Ratio Det. Diode Load - See Note 4
R26	3.6Ω	½	43X233	BW-½-2.6	Ratio Det. Diode Filament - Wire Wound
R27	27KΩ	½	B84273	BTS-27K	De-emphasis
R28	1Meg	½	B85105	BTS-1Meg	AVC Network
R29	470KΩ	½	B85474	BTS-470K	AVC Network
R30	47KΩ	½	B85473	BTS-47K	Diode Filter
R31	15KΩ	½	B85153	BTS-15K	Tone Compensation
R32	10Meg	½	B85106	BTS-10Meg	AF Amp. Grid
R33	270KΩ	½	B85274	BTS-270K	AF Amp. Plate
R34	10Meg	½	B85106	BTS-10Meg	Phase Inv. Grid
R35	270KΩ	½	B85274	BTS-270K	Phase Inv. Plate
R36	470KΩ	½	B85474	BTS-470K	Output Grid
R37	8200Ω	½	B84822	BTS-8200	Output Grid
R38	470KΩ	½	B85474	BTS-470K	Output Grid
R39	470Ω	2		BTB-470	Output Cathode - See Note 5
R40	1400Ω	5	43X242	1 3/4A-1450	Filter - Wire Wound

Note 1 Some models use single 68Ω Resistor in place of R4 & R5
Note 2 Some models use single 68Ω Resistor in place of R16 & R17
Note 3 Some models use single 68Ω Resistor in place of R20 & R21
Note 4 Some models use 6800Ω Resistor in this application
Note 5 Some models use 560Ω Resistor in this application

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	AIRLINE PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC ① .725A	650VCT .096ADC	5VAC ② 2A	6.3VAC ②3.2A	53X286	PM8410 ②	P-2953 (1&2)	PH-90 (1&2)

① Redrill mounting holes
② Add series resistor to reduce plate voltage

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		AIRLINE PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T2	9KΩCT	3.2Ω	500ΩCT	.53Ω	51X142	A-3823	A-2936	RO-100 ③	③ Drill one new mounting hole

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			INSTALLATION NOTES
			AIRLINE PART No.	VIKING PART No.	QUAM PART No.	
	FIELD	V. C. IMP.				
SP1	PM	3.2Ω	12A502	12J12	12A4A	
	CONE DIA.	V. C. DIA.				
SP2	11 3/8"	1"				

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA			NOTES
		PRI.	SEC.	AIRLINE PART No.	MEISSNER PART No.	IRC PART No.	
L1	FM Ant. Coil	0Ω	0Ω	9A2027			
L2	FM RF Coil	0Ω		9A2024			
L3	Loop Ant.	.1Ω	.9Ω	9A2041			
L4	AM RF Coil	28Ω	4.5Ω	9A2025			
L5	FM Osc. Coil	0Ω		9A2023			
L6	AM Osc. Coil	6Ω		9A2022	14-1073		Tap at 1.1Ω
L7	Cathode Choke	1.8Ω		35A5		CLA	2.2 Microhenries
L8	Fil. Choke	.6Ω		9A1881			
L9	RF Choke	.3Ω		35A7		CLA	.56 Microhenry
L10	1st AM IF	19Ω	19Ω	9A2029			Tertiary winding 5Ω
L11	1st FM IF	.5Ω	.8Ω	9A2043	16-3487		
L12	2nd AM IF	13Ω	13Ω	9A2042	16-6758		
L13	2nd FM IF	1.8Ω	.4Ω	9A2030			
L14A	Ratio Det. Trans.	1.2Ω	.2Ω	9A2064			
B	Ratio Det. Trans.	2.5Ω	.1Ω	9A1970			Alternate

PHONO CARTRIDGE and NEEDLE

ITEM No.	REPLACEMENT DATA							REMARKS
	AIRLINE PART No.	ASTATIC PART No.		SHURE PART No.		ELECTRO-VOICE PART No.		
		CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	
M1	S-P77V	ACD-J	A-1 A-3	W22AB	A65MG A62A	96-T	0-3 or S-3 0-1 or S-1	

ASTATIC, SHURE, AND ELECTRO-VOICE LISTINGS SHOWN ABOVE ARE SPECIFIED FOR THE RESPECTIVE REPLACEMENT CARTRIDGES LISTED:

DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					AIRLINE PART No.		
M2	Bayonet	6-8	.15	Brown	7A103		Type #47
M3	Bayonet	6-8	.15	Brown	7A103		Type #47

MISCELLANEOUS

ITEM No.	PART NAME	AIRLINE PART No.	NOTES
M4	Switch	2A391	AM-FM-Phono
M5	3 Gang Var. Cap.	14A207	(20-473MMF, 20-473MMF, 32-315MMF)
A14	Trimmer	26A489	FM Osc. Adj.
	Dial Glass	58X723	
	Dial Pointer	15X251	
	Knob	10A713	

PHOTOFACT* Folder

ARVIN MODEL
4162CM (CH. TE286)

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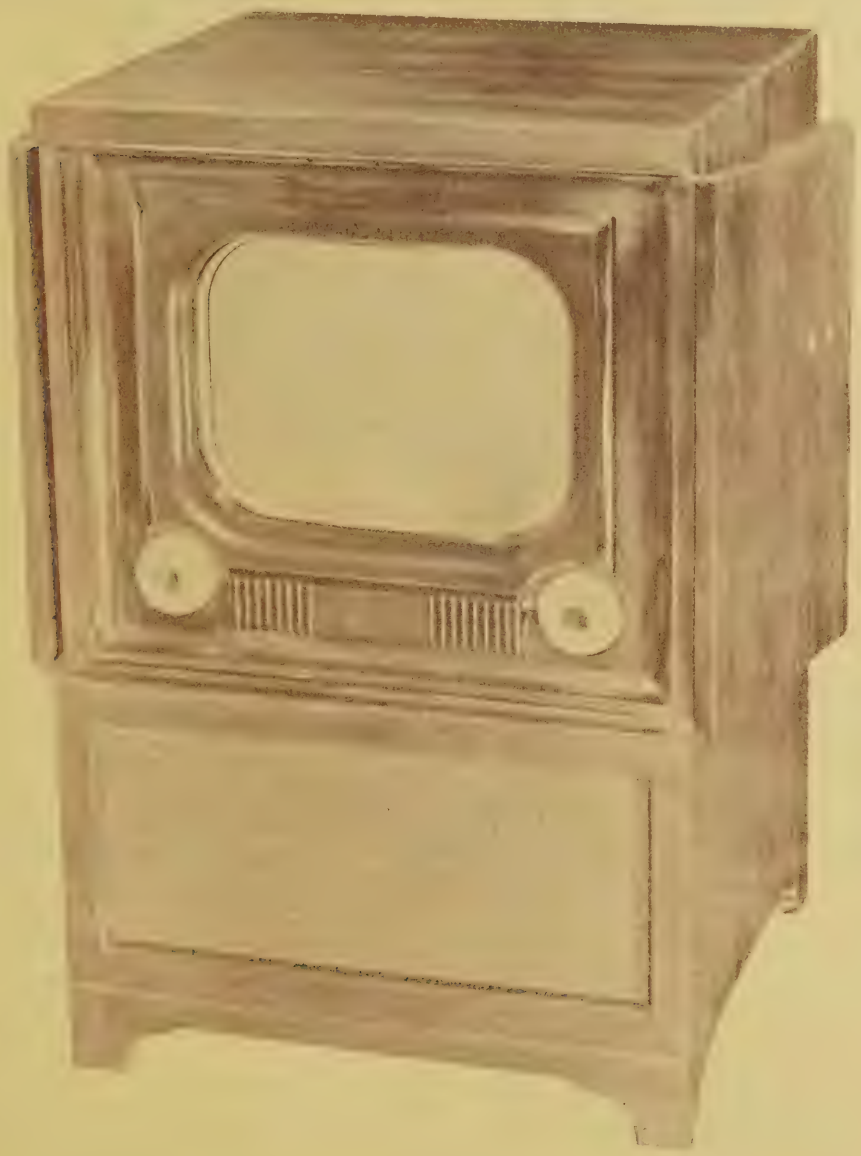

ARVIN MODEL
4162CM (CH. TE286)

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ARVIN MODEL 4162 (Ch. TE286)

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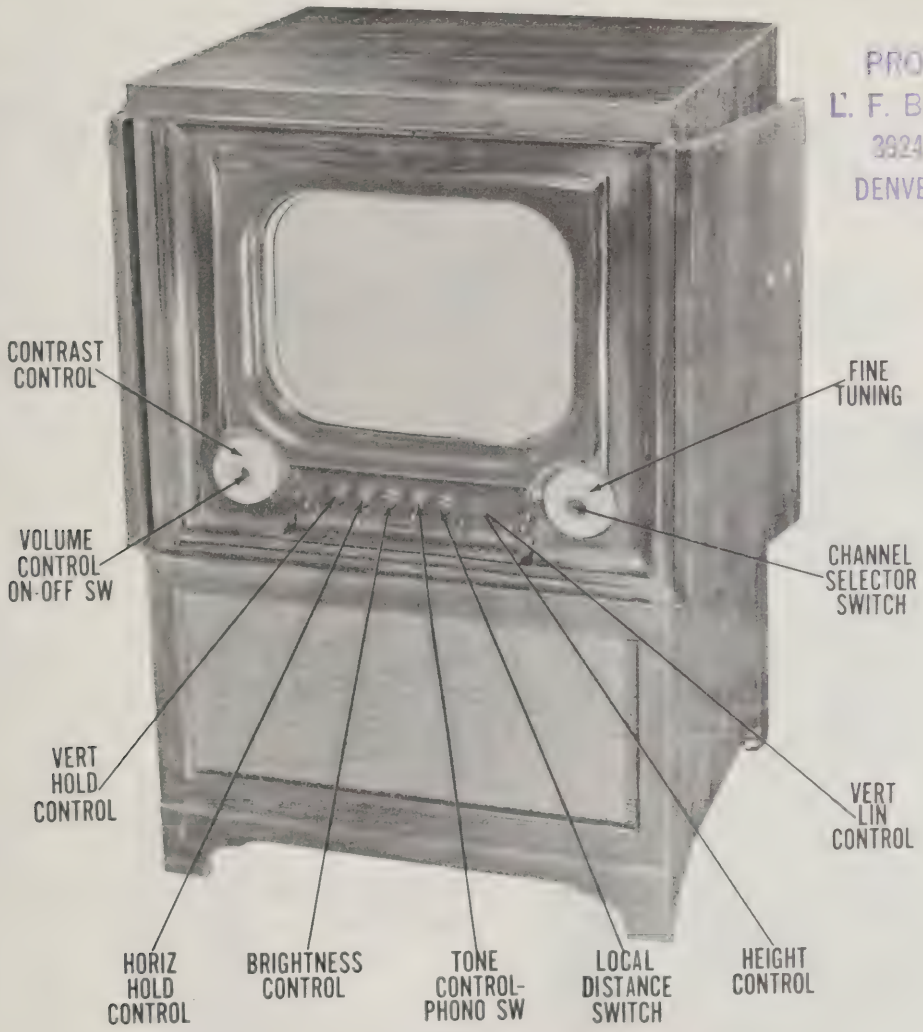

ARVIN MODEL 4162

TRADE NAME	Arvin, Model 4162 (Ch. TE 286)
MANUFACTURER	Arvin Industries, Inc., Columbus, Indiana
TYPE SET	Television Receiver
TUBES	Twenty Six
POWER SUPPLY	110-120 Volts AC - 60 Cycle — RATING 2.1 Amp. @ 117 Volts AC
TUNING RANGE—	Channels 2 thru 13

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ARVIN MODEL 4162 (Ch. TE286)

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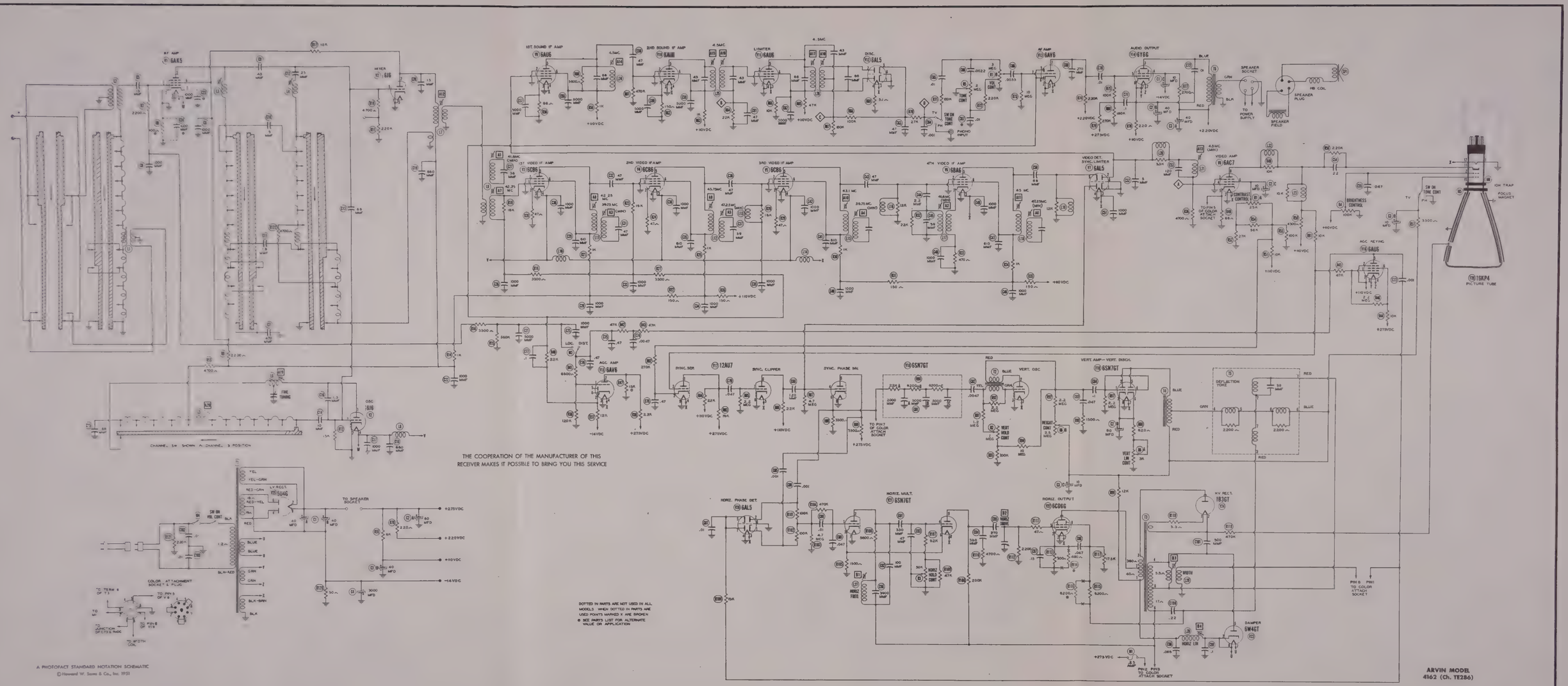
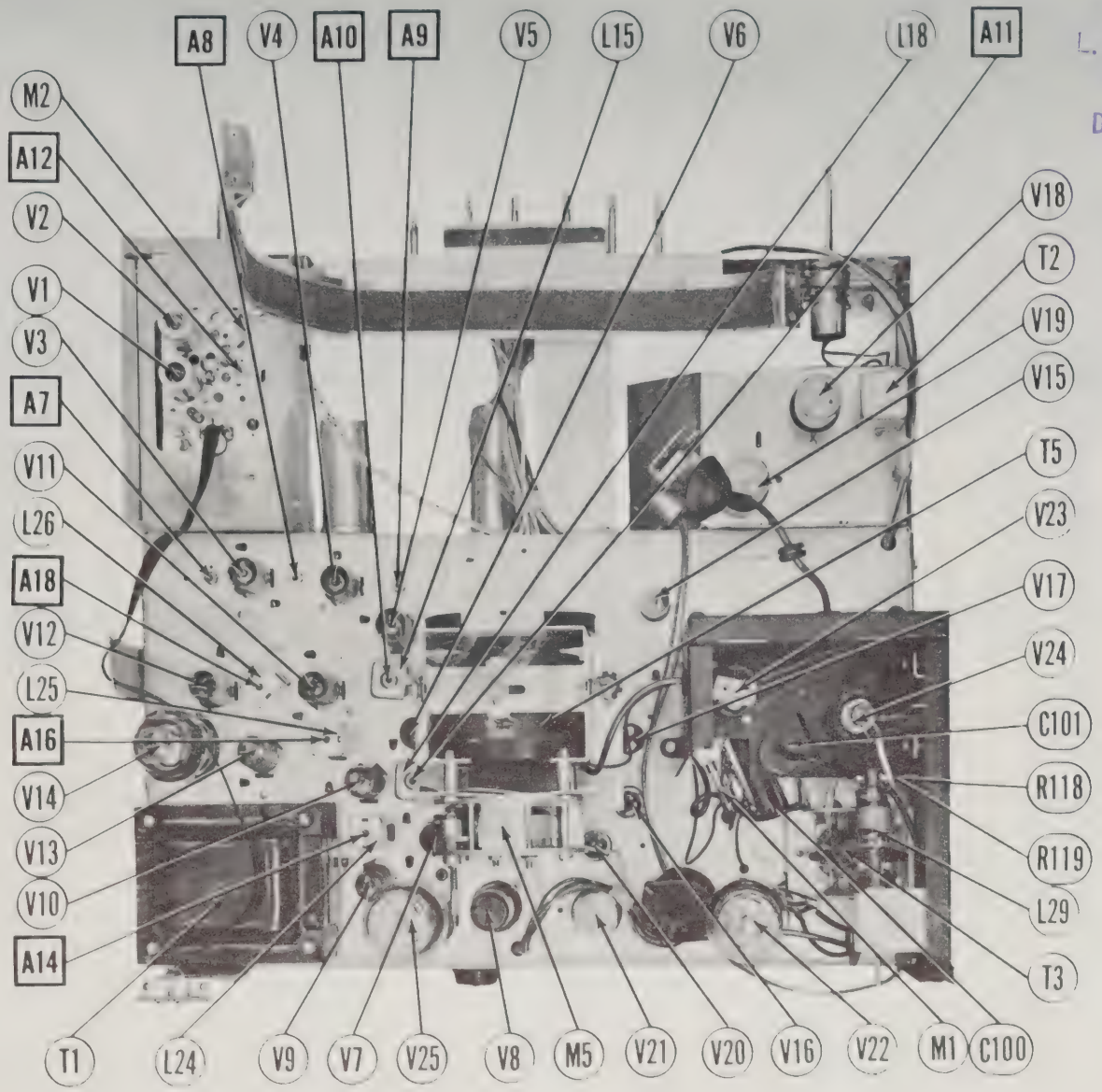


ARVIN MODEL 4162 (Ch. TE286)



CHASSIS TOP VIEW

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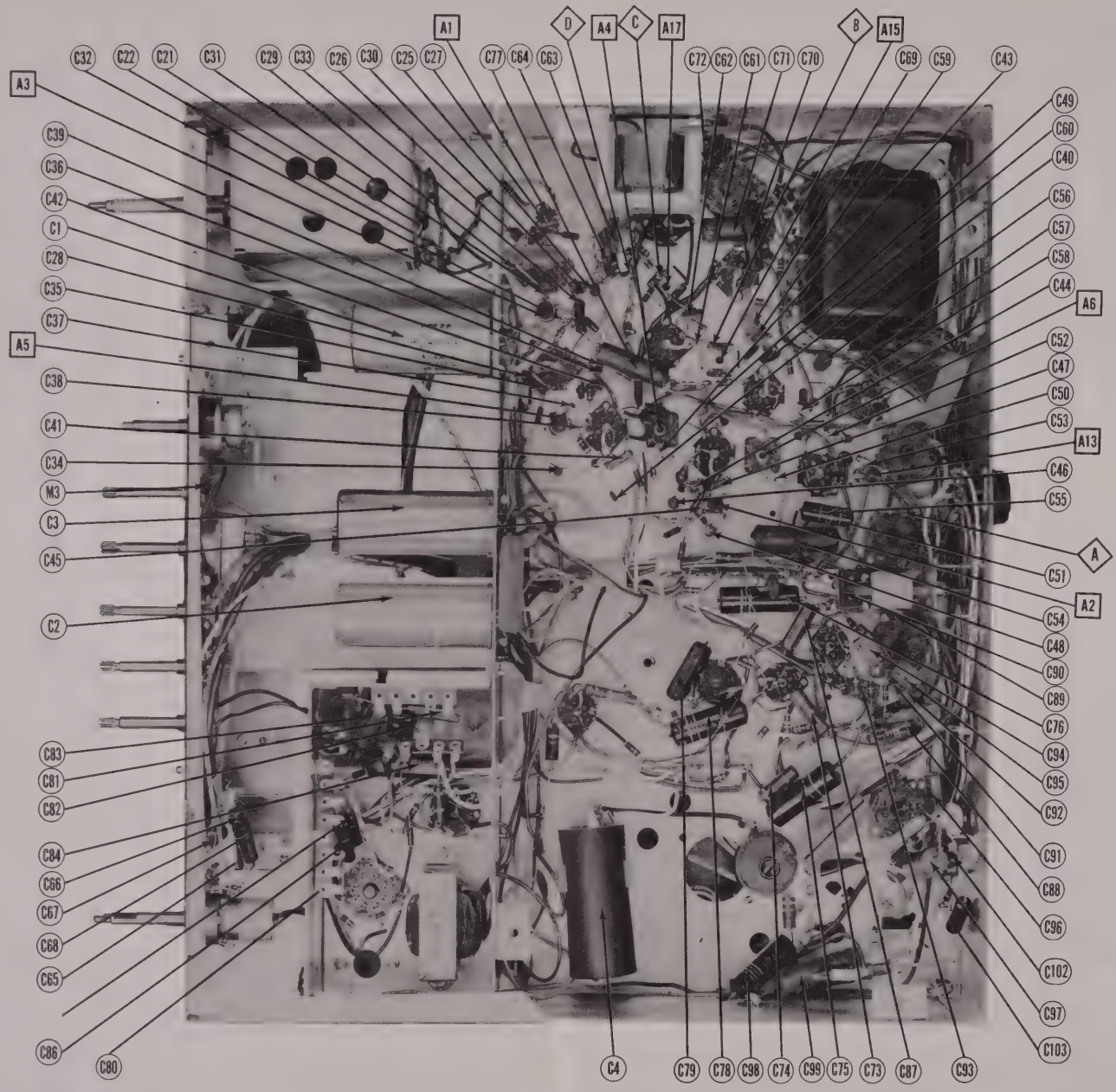

CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION

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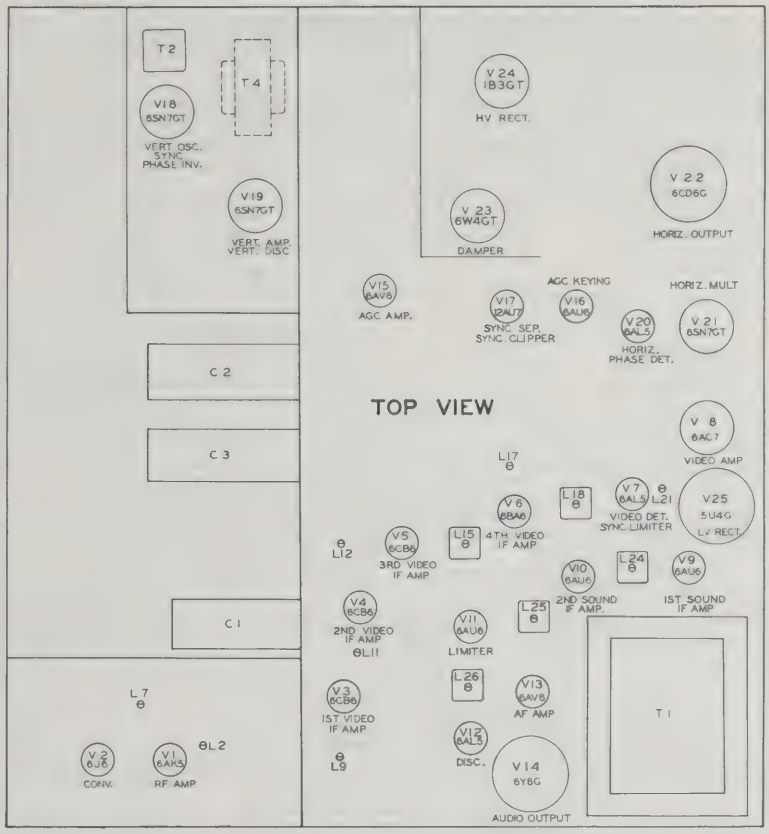

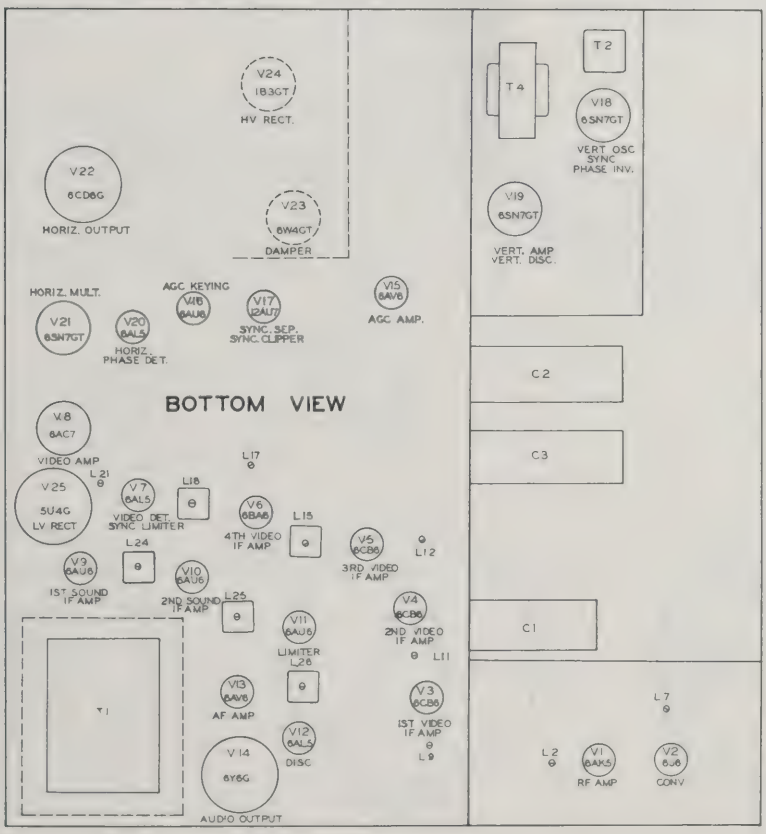

TUBE PLACEMENT CHART

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The end of the high voltage lead should be securely taped and kept away from the chassis. Do not remove the horizontal oscillator tube to disable the high voltage. Turn the "local-distance" switch to "local" (counter-clockwise).

VIDEO IF ALIGNMENT

Remove the converter tube (V2) and replace it with a 6J6 which has pin 1 removed, this will disable the local oscillator and prevent the possibility of erroneous indications.

Connect the negative lead of a 3 volt battery to the AGC line, (junction of R27 and C33), connect the positive lead to chassis.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1.	Direct	High side to an ungrounded tube shield floating over dummy converter tube (V2). Low side to chassis.	41.6MC (Unmod.)	Any	DC probe ot Point (A). Common to chassis.	A1, A2	Adjust for MINIMUM deflection.
2.	"	"	39.75MC	"	"	A3, A4	"
3.	"	"	47.25MC	"	"	A5, A6	"
4.	"	"	42.25MC	"	"	A7, A8	Adjust for maximum deflection.
5.	"	"	45.75MC	"	"	A9	"
6.	"	"	43.1MC	"	"	A10	"
7.	"	"	45MC	"	"	A11	"

OVERALL VIDEO IF RESPONSE CHECK

Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8.	Direct	High side to an ungrounded tube shield floating over dummy converter tube (V2). Low side to chassis.	43MC (10MC SWP)	41.6MC 42.25MC 45.0MC 45.75MC	Any	Vert. amp. to Point (A). Low side to chassis.		Check for response curve similar to fig. 1. If necessary adjust A12 for proper response. Slight retouch adjustments of A8 thru A11 may be required for optimum results.

4.5MC TRAP ADJUSTMENT

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
9.	.005MFD	High side to pin 5 (cath.) of 6AL5 (V7). Low side to chassis.	Not used	4.5MC (400∿ Mod.)	Any	Vert. amp. to pin 11 (cathode) of picture tube. Low side to chassis.	A13	Adjust for MINIMUM 400∿ indication on scope.

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
10.	.005MFD	High side to pin 5 (Cath.) of 6AL5 (V7). Low side to chassis.	4.5MC (Unmod.)	Any	DC probe to Point (B). Common to chassis.	A14, A15, A16	Adjust for maximum deflection.
11.	"	"	"	"	DC probe to Point (C). Common to chassis.	A17	"
12.	"	"	"	"	DC probe to Point (D). Common to chassis.	A18	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60∿ modulation and 450KC sweep. Use 120∿ sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
10.	.005MFD	High side to pin 5 (cath.) of 6AL5 (V7). Low side to chassis.	4.5MC (450KC SWP)	4.5MC	Any	Vert. amp. thru 47KΩ to Point (B). Low side to chassis.	A14, A15, A16	Adjust for maximum amplitude and symmetry as per figure 2.
11.	"	"	"	"	"	Vert. amp. thru 47KΩ to Point (C). Low side to chassis.	A17	"
12	"	"	"	"	"	Vert. amp. to Point (D). Low side to chassis.	A18	Adjust A18 so 4.5MC occurs at center of crossover lines as per figure 3. SLIGHTLY retouch A17 for maximum amplitude and straightness of crossover lines.

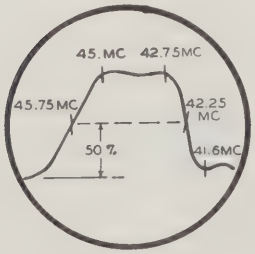

FIG.1

FIG. 2

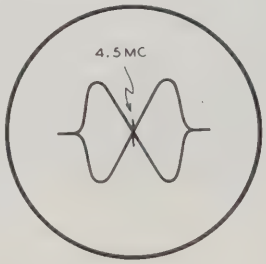

FIG. 3

ALIGNMENT INSTRUCTIONS (CONT.)

OSCILLATOR ALIGNMENT

Remove the dummy converter tube and replace the original 6J6 in its socket.
Leave the bias battery connected as in video IF alignment.
Set the fine tuning control to the mid-position of its range.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
13.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	213MC (10MC SWP)	211.25MC 215.75MC	13	Vert. amp. to Point A. Low side to chassis.	A19	Adjust to place video marker at 50% as shown in figure 4.
14.	"	"	207MC (10MC SWP)	205.25MC 209.75MC	12	"		Check all high band channels to see that the video marker can be properly placed well within the range of the fine tuning control. If not, make compromise adjustment of A19.
			201MC (10MC SWP)	199.25MC 203.75MC	11			
			195MC (10MC SWP)	193.25MC 197.75MC	10			
			189MC (10MC SWP)	187.25MC 191.75MC	9			
			183MC (10MC SWP)	181.25MC 185.75MC	8			
			177MC (10MC SWP)	175.25MC 179.75MC	7			
15.	"	"	85MC (10MC SWP)	83.25MC 87.75MC	6	"	A20	Adjust to place video marker at 50% as shown in figure 4.
16.	"	"	79MC (10MC SWP)	77.25MC 81.75MC	5	"		Check all low band channels to see that the video marker can be properly placed well within the range of the fine tuning control. If not, make compromise adjustment of A20.
			69MC (10MC SWP)	67.25MC 71.75MC	4			
			63MC (10MC SWP)	61.25MC 65.75MC	3			
			57MC (10MC SWP)	55.25MC 59.75MC	2			

THE RF AND MIXER PORTION OF THIS RECEIVER HAS BEEN PROPERLY ALIGNED AT THE FACTORY AND IS VERY STABLE. ALIGNMENT OF THIS PORTION SHOULD NOT BE REQUIRED IN THE FIELD.

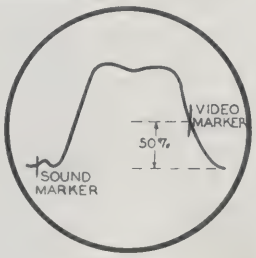

FIG. 4

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VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6AK5	-.2VDC	0V	0V	6.3VAC	65VDC	65VDC	0V		
V 2	6J6	55VDC	80VDC	0V	6.3VAC	-.6VDC	§-3.2VDC	0V		
V 3	6CB6	-.3VDC	.4VDC	0V	6.3VAC	90VDC	90VDC	0V		
V 4	6CB6	-.3VDC	.4VDC	6.3VAC	0V	95VDC	95VDC	0V		
V 5	6CB6	-.3VDC	.4VDC	0V	6.3VAC	90VDC	90VDC	0V		
V 6	6BA6	0V	0V	6.3VAC	0V	100VDC	100VDC	3.8VDC		
V 7	6AL5	0V	-.8VDC	6.3VAC	0V	0V	0V	-5VDC		
V 8	6AC7	0V	0V	0V	-.2VDC	0V	40VDC	6.3VAC	90VDC	
V 9	6AU6	-.5VDC	0V	0V	6.3VAC	100VDC	100VDC	.6VDC		
V 10	6AU6	0V	0V	0V	6.3VAC	100VDC	100VDC	.9VDC		
V 11	6AU6	-.2VDC	0V	6.3VAC	0V	17VDC	17VDC	0V		
V 12	6AL5	0V	-.6VDC	6.3VAC	1.2VAC	.3VDC	0V	-.6VDC		
V 13	6AV6	-.5VDC	0V	0V	6.3VAC	-.3VDC	-.3VDC	105VDC		
V 14	6Y6G	0V	¶	▲140VDC	▲145VDC	▲.5VDC	0V	¶	▲15VDC	
V 15	6AV6	-.3VDC	.2VDC	0V	6.3VAC	0V	0V	95VDC		
V 16	6AU6	95VDC	110VDC	¶	¶	-.4VDC	275VDC	110VDC		
V 17	12AU7	200VDC	90VDC	100VDC	6.3VAC	6.3VAC	45VDC	-.4VDC	0V	0V
V 18	6SN7GT	-2.5VDC -8VDC	110VDC 35VDC	0V	-5VDC	275VDC	2.6VDC	6.3VAC	0V	
V 19	6SN7GT	0V	420VDC 300VDC	23VDC 14VDC	0V	420VDC 300VDC	23VDC 14VDC	6.3VAC	0V	
V 20	6AL5	6VDC	-6VDC	6.3VAC	0V	.1VDC	0V	.1VDC		
V 21	6SN7GT	.2VDC	250VDC	11VDC	-2.8VDC -3.8VDC	120VDC	11VDC	0V	6.3VAC	
V 22	6CD6G	0V	0V	30VDC	0V	.2VDC	270VDC	6.3VAC	155VDC	TOP CAP *
V 23	6W4GT	0V	0V	500VDC	0V	270VDC	0V	500VDC	500VDC	
V 24	1B3GT	* DO NOT MEASURE								
V 25	5U4G	420VDC	300VDC	105VDC	320VAC	-14VDC	320VAC	0V	300VDC	
V 26	16KP4	0V	110VDC 0V	PIN 10 420VDC	PIN 11 70VDC	PIN 12 6.3VAC				

TV-PHONO SWITCH IN TV POSITION
LOCAL - DISTANT SWITCH IN LOCAL POSITION
§ TAKEN WITH VACUUM TUBE VOLTMETER
▲ MEASURED FROM +110VDC POINT
* DO NOT MEASURE

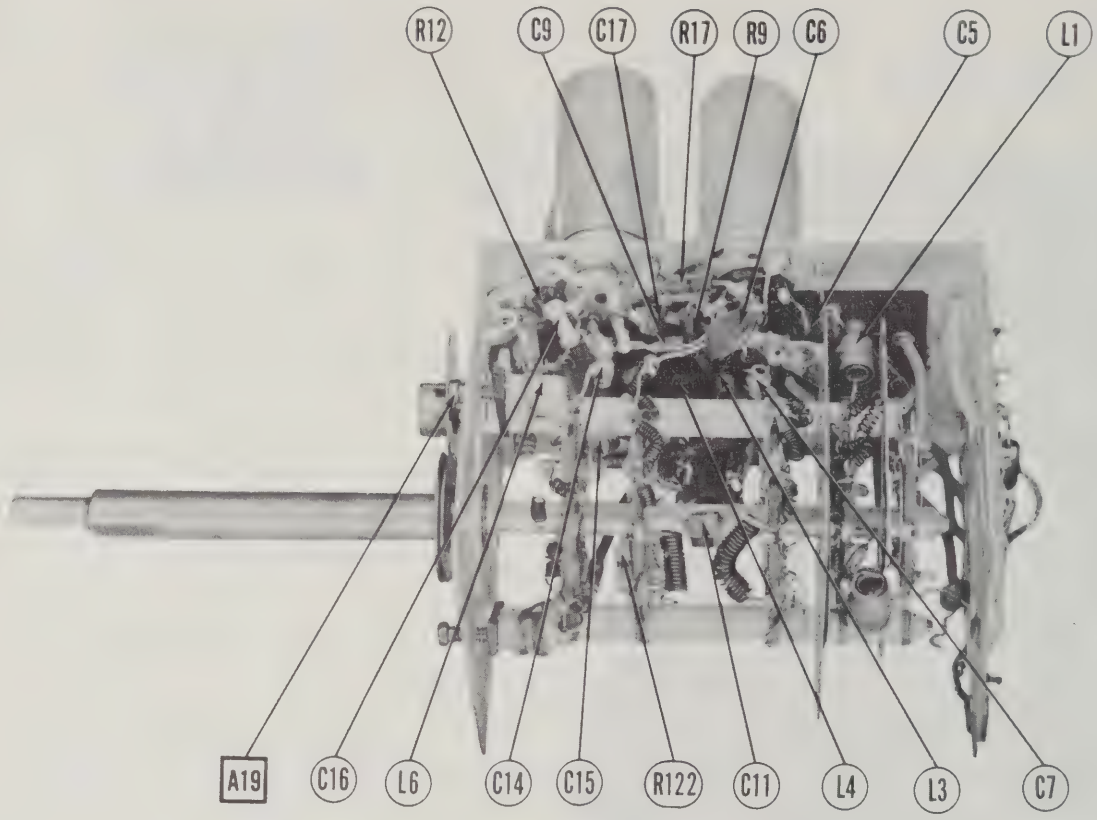
RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6AK5	100KΩ	0Ω	0Ω	.2Ω	▲3.5KΩ	▲3.5KΩ	0Ω		
V 2	6J6	▲6KΩ	▲1.3KΩ	0Ω	.2Ω	225KΩ	15KΩ	0Ω		
V 3	6CB6	40KΩ	47Ω	0Ω	.1Ω	▲1.3KΩ	▲1.3KΩ	0Ω		
V 4	6CB6	55KΩ	47Ω	.1Ω	0Ω	▲1.1KΩ	▲1.1KΩ	0Ω		
V 5	6CB6	34KΩ	47Ω	0Ω	.1Ω	▲1.3KΩ	▲1.3KΩ	0Ω		
V 6	6BA6	1.8Ω	0Ω	.1Ω	0Ω	▲1.1KΩ	▲1.1KΩ	470Ω		
V 7	6AL5	0Ω	4.7KΩ	.1Ω	0Ω	1.8Ω	0Ω	4.7Meg		
V 8	6AC7	0Ω	0Ω	0Ω	4.7KΩ	0Ω	▲18KΩ	.1Ω	▲4.3KΩ	
V 9	6AU6	4.7KΩ	0Ω	0Ω	.1Ω	▲1KΩ	▲1KΩ	68Ω		
V 10	6AU6	470KΩ	0Ω	0Ω	.1Ω	▲1KΩ	▲1KΩ	150Ω		
V 11	6AU6	22KΩ	0Ω	.1Ω	0Ω	▲18KΩ	▲18KΩ	0Ω		
V 12	6AL5	0Ω	100KΩ	.1Ω	2.6Ω	200KΩ	0Ω	100KΩ		
V 13	6AV6	10Meg	0Ω	0Ω	.1Ω	34KΩ	34KΩ	†220KΩ		
V 14	6Y6G	Inf.	▲200Ω	†495Ω	†3KΩ	220KΩ	.5Ω	▲220Ω	▲220Ω	
V 15	6AV6	100KΩ	12KΩ	0Ω	.1Ω	Inf.	Inf.	†15KΩ		
V 16	6AU6	▲60KΩ	▲0Ω	▲220Ω	▲220Ω	195KΩ	†10KΩ	▲0Ω		
V 17	12AU7	†12KΩ	▲15KΩ	285KΩ	.1Ω	.1Ω	▲22KΩ	2.2Meg	0Ω	0Ω
V 18	6SN7GT	1.3Meg 2.3Meg	#2Meg #3.2Meg	0Ω	4.7Meg	†3.4KΩ	3.3KΩ	.1Ω	0Ω	
V 19	6SN7GT	2.2Meg	#13KΩ	3.8KΩ 820Ω	2.2Meg	#13KΩ	3.8KΩ 820Ω	.1Ω	0Ω	
V 20	6AL5	4.8Meg	4.8Meg	.1Ω	0Ω	15KΩ	0Ω	15KΩ		
V 21	6SN7GT	5.2Meg	†5.7KΩ	1.5KΩ	82KΩ 100KΩ	†200KΩ	1.5KΩ	0Ω	.1Ω	
V 22	6CD6G	Inf.	0Ω	185Ω	Inf.	220KΩ	†130Ω	.1Ω	†4.2KΩ	TOP CAP #70Ω
V 23	6W4GT	Inf.	Inf.	80KΩ	Inf.	†100Ω	Inf.	#.2Ω	#0Ω	
V 24	1B3GT	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	TOP CAP #450Ω
V 25	5U4G	#15KΩ	14KΩ	▲220Ω	65Ω	50Ω	65Ω	0Ω	14KΩ	
V 26	16KP4	0Ω	30KΩ 0Ω	PIN 10 #15KΩ	PIN 11 225KΩ	PIN 12 .1Ω				

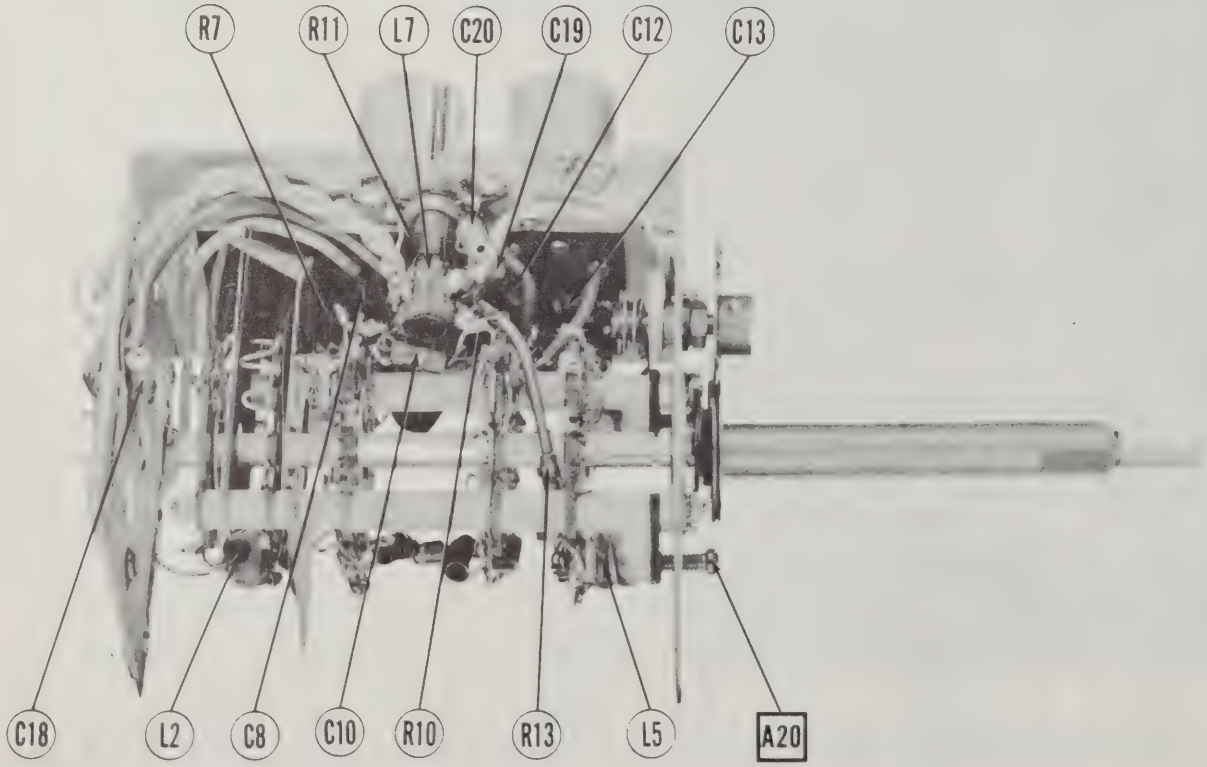
TV- PHONO SWITCH IN TV POSITION
LOCAL-DISTANT SWITCH IN LOCAL POSITION
▲ MEASURED FROM +110VDC POINT
† MEASURED FROM PIN 8 OF V 25
# MEASURED FROM PIN 3 OF V23.

ALL MEASUREMENTS MADE WITH PICTURE TUBE REMOVED

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltage measured at 1,000 ohms.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. Front panels controls set at minimum.
6. Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.



RF TUNER-RIGHT SIDE



RF TUNER-LEFT SIDE

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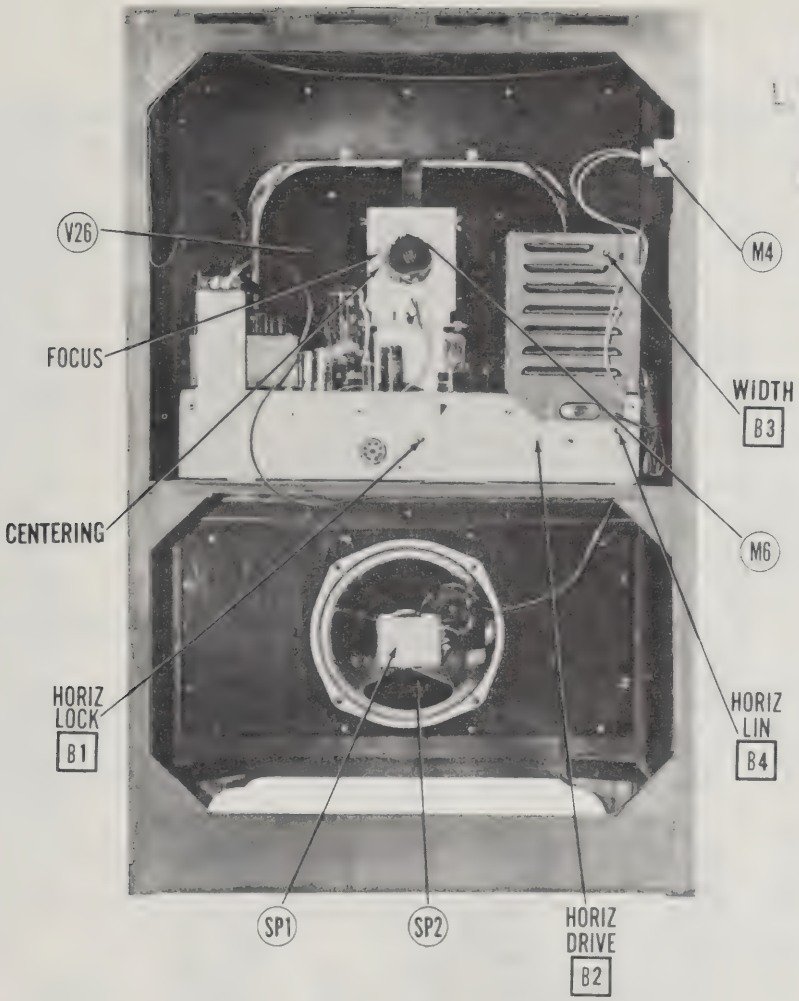

CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably a test pattern.

Turn the horizontal hold control to the mid-position of its range.

Adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally.

Adjust the horizontal drive trimmer (B2) for best compromise between brightness and horizontal linearity.

Adjust the width slug (B3) until the picture fills the mask horizontally.

Adjust the horizontal linearity slug (B4) until the picture is symmetrical from left to right.

Slight readjustment of B2 may be necessary for optimum results.

DISASSEMBLY INSTRUCTIONS

1. Remove four push-on type control knobs.
2. Remove eleven wood screws securing rear cover to cabinet. Remove rear cover.
3. Disconnect built-in antenna.
4. Remove interlock.
5. Disconnect speaker.
6. Remove six 3/8" hex head bolts from chassis. Remove chassis.
7. Remove four 3/8" hex nuts from speaker. Remove speaker.

NOTE: FOR PICTURE TUBE REMOVAL IT IS NECESSARY TO REMOVE THE CHASSIS AS OUTLINED ABOVE.

PARTS LIST AND DESCRIPTIONS

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DENVER, COLORADO

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: ARVIN PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	NOTES
V1	RF Amplifier	6AK5	6AK5	7BD	
V2	Converter	6J6	6J6	7BF	
V3	1st Video IF Amp.	6CB6	6CB6	6CK	
V4	2nd Video IF Amp.	6CB6	6CB6	6CK	
V5	3rd Video IF Amp.	6CB6	6CB6	6CK	
V6	4th Video IF Amp.	6BA6	6BA6	7BK	
V7	Video Detector - Sync. Limiter	6AL5	6AL5	6BT	
V8	Video Amplifier	6AC7	7AC7	8N	
V9	1st Sound IF Amp.	6AU6	6AU6	7BK	
V10	2nd Sound IF Amp.	6AU6	6AU6	7BK	
V11	Limiter	6AU6	6AU6	7BK	
V12	Discriminator	6AL5	6AL5	6BT	
V13	AF Amplifier	6AV6	6AV6	7BT	
V14	Audio Output	6Y6G	6Y6G	7AC	
V15	AGC Amplifier	6AV6	6AV6	7BT	
V16	AGC Keying	6AU6	6AU6	7BK	
V17	Sync Separator - Sync Clipper	12AU7	12AU7	9A	
V18	Sync. Phase Inv Vert. Oscillator	6SN7GT	6SN7GT	8BD	
V19	Vert. Amplifier - Vert. Discharge	6SN7GT	6SN7GT	8BD	
V20	Horiz. Phase Det.	6AL5	6AL5	6BT	
V21	Horiz. Mult.	6SN7GT	6SN7GT	8BD	
V22	Horiz Output	6CD6G	6CD6G	5BT	
V23	Damper	6W4GT	6W4GT	4CG	
V24	H. V. Rectifier	1B3GT	1B3GT	5T	
V25	L. V. Rectifier	5U4G	5U4G	5T	
V26	Picture Tube	16KP4A	16KP4A	12D	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: ARVIN PART No.	REPLACEMENT DATA: AEROVOX PART No.	REPLACEMENT DATA: CENTRALAB PART No.	REPLACEMENT DATA: CORNELL-DUBILIER PART No.	REPLACEMENT DATA: ERIE PART No.	REPLACEMENT DATA: SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1A	40	450	E22422-7	AFH882J		UPT4145		TVL-3785	▫ Filter
B	40	450							■ Filter
C	10	450							▲ Output Screen
C2A	60	450	E22422-9	AFH1238F2D 16B		UPT4215V10 BR4035			▫ Filter
B	40	250							■ Filter
C	10	150							▲ V. Amp. Screen
D	80	50							▲ Vert. Output Cathode
C3A	40	450	E22422-8	AFH822J8F		UPT4114S		TVL-3785	▫ Filter
B	10	450				BR4025		TVA-1705	■ Decoupling
C	10	450							▲ Decoupling
D	40	250							Filter
C4	3000	15	E22422-12	AF600P		UP3M-15			Filter
C5	15			SI15	D6-150		GPIK-15	19C22	RF Coupling
C6	1000			BPD-001	DD-102		8GI-001	19C1	RF Amp. Dec.
C7	470			SI470	D6-471		GP2K-470	19C15	RF Amp. Dec.
C8	1000			BPD-001	DD-102		8GI-001	19C1	AGC Filter
C9	.45								RF Coupling
C10	.5				TCZ-.5				RF Coupling
C11	1.8								RF Coupling
C12	25			SI25	D6-250		GPIK-25	19C27	RF Coupling
C13	.68				TCZ-.68				Osc. Coupling
C14	10			SI10NPO	TCZ-10		NPOK-10	19C3	Osc. Grid Cap
C15	.68				TCZ-.68				Fixed Trimmer
C16	1.5						N33GK-1.5		Osc. Feedback
C17	1000			BPD-001	DD-102		8GI-001	19C1	Conv. Filament
C18	680			SI680	D6-681		GP2K-680	19C17	Filament Bypass
C19	680			SI680	D6-681		GP2K-680	19C17	RF Bypass
C20	15			SI15	D6-150		GPIK-15	19C22	Fixed Trimmer
C21	5000		A21674	BPD-005	DD-502	1D5D5	81I-005	29C1	AGC Filter
C22	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	RF Bypass
C23	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	RF Amp. Cathode ' †
C24	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	RF Amp. Cathode †
C25	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	AGC Filter
C26	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	AGC Filter
C27	36						N33GK-36		Fixed Trimmer
C28	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	RF Bypass
C29	610		C20351-1	SI680	D6-681	1W5T7	GP2K-680	19C17	1st V. IF Dec.
C30	1000		A23078	BPD-001	D6-102	1W5D1	8GI-001	19C1	1st V. IF Fil.
C31	47						N33GK-47		Fixed Trimmer
C32	47		C20205-19	SI47	D6-470	5W5Q5	GPIK-47	19C25	IF Coupling
C33	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	AGC Filter
C34	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	RF Bypass
C35	610		C20351-1	SI680	D6-681	1W5T7	GP2K-680	19C17	2nd V. IF Dec.
C36	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	2nd V. IF Fil.
C37	39						N33GK-39		Fixed Trimmer
C38	47		C20205-19	SI47	D6-47	5W5Q5	GPIK-47	19C25	IF Coupling
C39	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	AGC Filter
C40	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	RF Bypass
C41	610		C20351-1	SI680	D6-681	1W5T7	GP2K-680	19C17	3rd V. IF Dec.
C42	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	3rd V. IF Fil.
C43	47		C20205-19	SI47	D6-470	5W5Q5	GPIK-47	19C25	IF Coupling
C44	2.2		C30205-7		TCZ-2.2				IF Coupling
C45	39						N33GK-39		Fixed Trimmer
C46	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	RF Bypass
C47	610		C20351-1	SI680	D6-681	1W5D7	GP2K-680	19C17	4th V. IF Dec.
C48	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	4th V. IF Cathode
C49	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	4th V. IF Fil.
C50	68		C20205-11	SI68	D6-680	5W5Q7	GPIK-68	19C10	IF Coupling
C51	1000		A23078	BPD-001	DD-102	1W5D1	8GI-001	19C1	V. Det. Fil.
C52	5		C30205-9	SI5	TCZ-4.7	5W5V5	GPIK-5	MB-55	V. Diode Filter
C53	120				TCZ-120		NPOM-120		Fixed Trimmer
C54	.22	400	C20292-224	P488-22		GT4P25		4TM-P22	Video Coupling
C55	.047	400	C20292-473	P488-047	DF-503	PTE485		4TM-847	Pic. Tube Grid
C56	5000		A21674	BPD-005	DD-502	1D5D5	81I-005	29C1	1st S. IF Dec.
C57	5000		A21674	BPD-005	DD-502	1D5D5	81I-005	29C1	1st S. IF Cath.

CAPACITORS (CONT.)

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: ARVIN PART No.	REPLACEMENT DATA: AEROVOX PART No.	REPLACEMENT DATA: CENTRALAB PART No.	REPLACEMENT DATA: CORNELL-DUBILIER PART No.	REPLACEMENT DATA: ERIE PART No.	REPLACEMENT DATA: SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C58	47		C20205-19	SI47	D6-470	5W5Q5	GPIK-47	19C25	S. IF Coupling
C59	5000		A21674	BPD-005	DD-502	1D5D5	81I-005	29C1	2nd S. IF Dec.
C60	5000		A21674	BPD-005	DD-502	1D5D5	81I-005	29C1	2nd S. IF Cathode
C61	47		C20205-19	SI47	D6-470	5W5Q5	GPIK-47	19C25	Limiter Grid Filter
C62	5000		A21674	BPD-005	DD-502	1D5D5	81I-005	29C1	Limiter Dec.
C63	47	500	C20205-19	1468-00005	D6-470	5W5Q5	GPIK-47	1FM-45	RF Bypass
C64	.001	600	C20295-102	P688-001	D6-102	PTE6D1	GP2L-001	6TM-D1	De-emphasis
C65	.01	600	C20295-103	P688-01	D6-103	PTE6S1	821-01	6TM-S1	Audio Coupling
C66	.0022	600	C20295-222	P688-0022	D6-222	PTE6D2	GP2M-0022	6TM-D2	Tone Comp.
C67	.01	600	C20295-103	P688-01	D6-103	PTE6S1	821-01	6TM-S1	Tone Comp. †
C68	.0033	600	C20295-332	P688-0033	D6-332	PTE6D3	GP2M-0033	6TM-D33	Audio Coupling
C69	270	500	C20290-271	1468-00025	D6-271	5W5T25	GP2K-270	1FM-325	AF Amp. Plate
C70	.01	1000	C20296-103	P1068-01		PTE16S1		MB-S1	Audio Coupling
C71	.1	400	C20292-104	P488-1	DF-104	PTE4P1		4TM-P1	Bias Filter
C72	.01	1000	C20296-103	P1068-01		PTE16S1		MB-S1	Output Plate
C73	.001	600	C20295-102	P688-001	D6-102	PTE6D1	GP2L-001	6TM-D1	Hor. Sweep Feedback
C74	.0047	600	C20295-472	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	AGC Filter
C75	.47	200	C20291-474	P288-47		GT2P5		2TM-P47	AGC Filter
C76	.47	200	C20291-474	P288-47		GT2P5		2TM-P47	AGC Filter
C77	.1	200	C20291-104	P288-1	DF-104	PTE4P1		2TM-P1	AGC Filter
C78	.47	200	C20291-474	P288-47		GT2P5		2TM-P47	Sync. Sep. Cathode
C79	.047	600	C20295-473	P688-047	DF-503	PTE6S5		6TM-S47	Sync. Coupling
C80	120	500	C20285-121	1468-00015	D6-121	5W5T15	GP2K-120	1FM-315	Sync. Coupling
C81A	2000		* C24166	P688-002	*	PTE6D2	GP2M-002	6TM-D2	Integrator Net
B	5000			P688-005	PC-100	PTE6D5	81I-005	6TM-D5	Integrator Net
C82C	5000			P688-005		PTE6D5	81I-005	6TM-D5	Integrator Net
C82	.0047	600	C20324-472	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Vert. Osc. Grid
C83	.047	600	C20295-473	P688-047		PTE6S5		6TM-S47	Vertical Discharge
C84	.1	600	C20295-104	P688-1	DF-104	PTE6P1		6TM-P1	Vertical Sweep Coupling
C85	.001	600	C20324-102	P688-001	D6-102	PTE6D1	GP2L-001	6TM-D1	Horiz. Sync. Coupling
C86	.001	600	C20324-102	P688-001	D6-102	PTE6D1	GP2L-001	6TM-D1	Horiz. Sync. Coupling
C87	.01	600	C20295-103	P688-01	D6-103	PTE6S1	821-01	6TM-S1	Voltage Divider
C88	.01	600	C20295-103	P688-01	D6-103	PTE6S1	821-01	6TM-S1	AFC Filter
C89	.047	200	C20291-473	P288-047	DF-503	PTE4S5		2TM-S47	AFC Filter
C90	3900	500	C20374-392	1464-004		1DR5D4		MS-24	Fixed Trimmer
C91	330	500	C20290-331	1468-00035	D6-331	5W5T3	GP2K-330	1FM-335	Horiz. MV Feedback
C92	100	500	C20290-101	1468-0001	D6-101	5W5T1	GP1K-100	1FM-31	Horiz. MV Plate
C93	47	500	C20290-470	1468-00005	D6-470	5W5Q5	GPIK-47	1FM-45	Horiz. MV Grid
C94	330	500	C20290-331	SI330	D6-331	5R5T3	GP2K-330	19C14	Horiz. Discharge
C95	270	500	C20290-271	1468-00025	D6-271	5W5T25	GP2K-270	1FM-325	Horiz. Sweep Coupling
C96	.047	600	C20295-473	P688-047	DF-503	PTE6S5		6TM-S47	Horiz. Output Screen
C97	.15	300	C20291-154	P288-15		GT4P2		2TM-P15	Horiz. Output Cath.
C98	.068	1000	C20329-683	P1068-068					Damper Filter
C99	.1	1000	C20320-104	1084-1					Damper Filter
C100	.22	400	C20292-224	P488-22		GT4P25		4TM-P22	Horiz. Sweep Coupling
C101	500	20000	A22496	HV20B	TV1-502				H. V. Filter
C102	.01	600	C20358-103	P688-01	D6-103	PTE6S1	821-01	6TM-S1	Line Filter
C103	.01	600	C20358-103	P688-01	D6-103	PTE6S1	821-01	6TM-S1	Line Filter

* Items C81A, C81B, C81C, R90A, R90B and R90C are combined into one unit.
† Not used in all models.
‡ Some models use .0033MFD in this application.

CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: ARVIN PART No.	REPLACEMENT DATA: IRC PART No.	REPLACEMENT DATA: CLAROSTAT PART No.	REPLACEMENT DATA: CENTRALAB PART No.	INSTALLATION NOTES
R1A	25KΩ	½	E22464-17				Contrast Control - Front
B	3Meg	½					Volume Control And SW - Tapped ⓐ 1 Meg - Rear
R2A	1Meg	½	E22464-22	Q11-137	AG-61-S	AN-69	Vertical Hold Control
B	Shaft		Not req.	Not req.	KSS-3	AK-4	Attach to R2A Per Instructions
R3A	50KΩ	½	E22464-23	Q11-123	AG-44-S	AN-31	Horizontal Hold Control
B	Shaft		Not req.	Not req.	KSS-3	AK-4	Attach to R3A Per Instructions
R4A	100KΩ	½	E22464-18	Q11-128	AG-46-S	AN-40	Brightness Control
B	Shaft		Not req.	Not req.	KSS-3	AK-4	Attach to R4A Per Instructions
R5	2Meg	½	E22464-19				Tone Control and Phono SW
R6A	3000Ω	2	E22464-20				Vertical Linearity Control - Wire Wound - Front
B	2.5Meg	½					Height Control - Rear

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: ARVIN PART No.	REPLACEMENT DATA: IRC PART No.	IDENTIFICATION CODES ALL RESISTORS ± 10% UNLESS OTHERWISE SPECIFIED
R7	2200Ω 20%	½		BTS-2200	AGC Network
R8	100Ω	½		BTS-100	RF Amp. Cathode - See Note 1
R9	2200Ω 20%	½		BTS-2200	RF Amp. Decoupling
R10	4700Ω	½		BTS-4700	Mixer Grid
R11	220KΩ 20%	½			Mixer Grid
R12	15KΩ 20%	½			Osc. Grid
R13	4700Ω	½		BTS-4700	Osc. Plate
R14	1000Ω 20%	½	C20061-102	BTS-1000	Decoupling
R15	560KΩ	½	C22381-564	BTS-560K	AGC Network
R16	3300Ω 20%	½	C20061-332	BTS-3300	AGC Network
R17	18KΩ 20%	½	C20061-183		Conv. Plate Coil Shunt
R18	3300Ω 20%	½	C20061-332	BTS-3300	AGC Network
R19	18KΩ	½	C22381-183		1st Video IF Transformer Shunt
R20	47Ω	½	C22381-470		1st Video IF Amp. Cathode
R21	1000Ω 20%	½	C20061-102	BTS-1000	1st Video IF Amp. Decoupling
R22	150Ω 20%	½	C20061-151	BTS-150	Decoupling
R23	18KΩ	½	C22381-183		2nd Video IF Amp. Grid
R24	47Ω	½	C22381-470		2nd Video IF Amp. Cathode
R25	1000Ω 20%	½	C20061-102	BTS-1000	2nd Video IF Amp. Decoupling
R26	150Ω 20%	½	C20061-151	BTS-150	Decoupling
R27	3300Ω 20%	½	C20061-332	BTS-3300	AGC Network
R28	18KΩ	½	C22381-183		3rd Video IF Grid Choke Shunt
R29	47Ω	½	C22381-470		3rd Video IF Amp. Cathode
R30	1000Ω 20%	½	C20061-102	BTS-1000	3rd Video IF Amp. Decoupling
R31	150Ω 20%	½	C20061-151	BTS-150	Decoupling
R32	22KΩ	½	C22381-223		Sound Trap Shunt
R33	470Ω	½	C22381-471	BTS-470	4th Video IF Amp. Cathode
R34	1000Ω 20%	½	C20061-102	BTS-1000	4th Video IF Amp. Decoupling
R35	150Ω 20%	½	C20061-151	BTS-150	Decoupling
R36	4700Ω	½	C22381-472	BTS-4700	Video Det. Diode Load
R37	12KΩ 5%	½	C22382-123	BTS-12K-5%	Bias Network

RESISTORS (CONT.)

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: ARVIN PART No.	REPLACEMENT DATA: IRC PART No.	IDENTIFICATION CODES
R38	120KΩ	½	C22381-124	BTS-120K	AGC Amp. Grid
R39	22KΩ	½	C20302-223	BTB-22K	AGC Amp. Plate
R40	22KΩ	½	C22381-223	BTS-22K	AGC Network
R41	6800Ω	½	C22381-682	BTS-6800	AGC Network
R42	47KΩ	½	C22381-473	BTS-47K	AGC Network
R43	47KΩ	½	C22381-473	BTS-47K	AGC Network
R44	10KΩ	½	C22381-103	BTS-10K	AGC Network
R45	47KΩ 20%	½	C20061-473	BTS-47K	Voltage Divider
R46	2.2Meg	½	C22381-225	BTS-2.2Meg	Voltage Divider
R47	15KΩ	2		BTB-15K	Voltage Divider - See Note 2
R48	68Ω	½	C22381-680	BW-½-68	Video Amp. Cathode
R49	10KΩ 20%	½	C20061-103	BTS-10K	Video Peaking Coil Shunt
R50	43000Ω 5%	½	C23383-432		Video Amp. Plate
R51	10KΩ	½	C22381-103	BTS-10K	Voltage Divider
R52	27KΩ	½	C22381-273	BTS-27K	Voltage Divider
R53	100KΩ	½	C22381-104	BTS-100K	Voltage Divider
R54	56KΩ	½	C22381-563	BTS-56K	Contrast Control Shunt
R55	8000Ω	10	C23970-5	1 3/4A-8000	Decoupling - See Note 1
R56	220KΩ	½	C22381-224	BTS-220K	Isolation
R57	3300Ω 20%	½	C20061-332	BTS-3300	AGC Anode Load
R58	68Ω	½	C22381-680		1st Sound IF Amp. Cathode
R59	1000Ω	½	C22381-102	BTS-1000	1st Sound IF Amp. Decoupling
R60	5600Ω	½	C22381-562		1st Sound IF Transformer Shunt
R61	470KΩ	½	C22381-474		2nd Sound IF Amp. Grid
R62	150Ω	½	C22381-151	BTS-150	2nd Sound IF Amp. Cathode
R63	1000Ω	½	C22381-102	BTS-1000	2nd Sound IF Amp. Decoupling
R64	22KΩ	½	C22381-223	BTS-22K	Limiter Grid
R65	47KΩ	½	C22381-473	BTS-47K	Limiter Decoupling
R66	10KΩ	½	C22381-103	BTS-10K	Voltage Divider
R67	100KΩ	½	C22381-104	BTS-100K	Disc. Diode Load
R68	100KΩ	½	C22381-104	BTS-100K	Disc. Diode Load
R69	5.1Ω	½	C20308-51	BW-½-5.1	Disc. Diode Filament - Wire Wound
R70	27KΩ	½	C22381-273	BTS-27K	De-emphasis
R71	100KΩ	½	C22381-104	BTS-100K	Tone Compensation
R72	220KΩ	½	C22381-224	BTS-220K	Tone Compensation
R73	10Meg	½	C22381-106	BTS-10Meg	AF Amp. Grid
R74	220KΩ	½	C22381-224	BTS-220K	AF Amp. Plate
R75	100KΩ 5%	½	C22382-104	BTS-100K-5%	Output Grid
R76	220KΩ	2	C20302-221	BW-2-220	Output Cathode
R77	2700Ω	2	C20302-272	BTB-2700	Output Screen
R78	220Ω	2	C20302-221	BW-2-220	Decoupling
R79	270KΩ 5%	½	C22382-274	BTS-270K-5%	Voltage Divider
R80	180KΩ 5%	½	C22382-184	BTS-180K-5%	Bias Network
R81	10KΩ 20%	½	C20061-103	BTS-10K	Isolation
R82	270KΩ	½	C22381-274	BTS-270K	Sync. Sep. Cathode
R83	18KΩ	½	C22381-183	BTS-18K	Sync. Sep. Plate
R84	22KΩ	½	C22381-223	BTS-22K	Voltage Divider
R85	2.2Meg	½	C22381-225	BTS-2.2Meg	Sync. Clipper Grid
R86	22KΩ	½	C22381-223	BTS-22K	Sync. Clipper Plate
R87	4.7Meg	½	C22381-473	BTS-4.7Meg	Sync. Phase Inv. Grid
R88	3300Ω	½	C22381-332	BTS-3300	Sync. Phase Inv. Cathode
R89	3300Ω	½	C22381-332	BTS-3300	Sync. Phase Inv. Plate
R90A	22KΩ	½	C24166 *	BTS-22K	Integrator
B	8200Ω			BTS-8200	Integrator
C	8200Ω			BTS-8200	Integrator
R91	1.2Meg 5%	½	C22382-125	BTS-1.2Meg-5%	Vert. Osc. Grid
R92	2.2Meg	½	C22381-225	BTS-2.2Meg	Vert. Osc. Plate
R93	2.2Meg 20%	½	C20061-225	BTS-2.2Meg	Vert. Osc. Transformer Shunt
R94	10Meg	½	C22381-106	BTS-10Meg	Voltage Divider
R95	100KΩ	½	C22381-104	BTS-100K	Voltage Divider
R96	1500Ω	½	C22381-152	BTS-1500	Vertical Peaking
R97	2.2Meg	½	C22381-225	BTS-2.2Meg	Vertical Amp. Grid
R98	820Ω	1	C20070-821	BTA-820	Vertical Amp. Cathode
R99	12KΩ	2	C20302-123	BTB-12K	Decoupling
R100	15KΩ	2	C20302-153	BTB-15K	Horizontal Feedback Network
R101	100KΩ	½	C22381-104	BTS-100K	Horizontal Phase Det. Diode Load
R102	100KΩ	½	C22381-104	BTS-100K	Horizontal Phase Det. Diode Load
R103	4.7Meg	½	C22381-475	BTS-4.7Meg	Horizontal Phase Det. Diode Load
R104	470KΩ	½	C22381-474	BTS-470K	Horizontal AFC Filter
R105	1500Ω	½	C22381-152	BTS-1500	Horizontal MV Cathode
R106	5600Ω	½	C22381-562	BTS-5600	Horizontal MV Plate
R107	82KΩ	½	C22381-823	BTS-82K	Horizontal MV Grid
R108	200KΩ 5%	½	C22382-204		Horizontal MV Plate
R109	47KΩ	½	C22381-473	BTS-47K	Horizontal Hold Control Shunt
R110	4700Ω	½	C22381-472	BTS-4700	Horizontal Peaking
R111	47Ω	½	C22381-470		Parasitic Suppressor
R112	220KΩ	½	C22381-224	BTS-220K	Horizontal Output Grid
R113	300Ω	10	C23970-4	1 3/4A-300	Horizontal Output Cathode - Wire Wound
R114	480Ω 5%	2			Horizontal Output Cathode - Wire Wound - See Note 1
R115	8200Ω	10	C23970-5	1 3/4A-8000	Horizontal Output Screen - Wire Wound
R116	8200Ω	10	C23970-5	1 3/4A-8000	Horizontal Output Screen - Wire Wound - See Note 1
R117	17,500Ω		A24113 ♦		Voltage Leveling
R118	3.3Ω	½	C20308-33	BW-½-3.3	H. V. Rectifier Filament - Wire Wound
R119	470KΩ 20%	1	C20103-474		H. V. Filter
R120	50Ω	5	C23970-6	1 3/4A-50	Surge Limiter - Wire Wound
R121	220KΩ 20%	½	C20061-224	BTS-220K	Isolation
R122	4700Ω	½	C22381-472	BTS-4700	RF Coil Shunt

♦ Special Type: Replace with original only.
* Items R90A, R90B, R90C, C81A, C81B and C81C are combined into one unit.
Note 1. Not used in all models.
Note 2. Some models use 11KΩ resistor in this application.

TRANSFORMER (POWER)

ITEM No.	RATING: PRI.	RATING: SEC. 1	RATING: SEC. 2	RATING: SEC. 3	REPLACEMENT DATA: ARVIN PART No.	REPLACEMENT DATA: STANCOR PART No.	REPLACEMENT DATA: MERIT PART No.	REPLACEMENT DATA: CHICAGO PART No.
T1	117VAC ⓐ 2.1A	650VCT .300ADC	5VAC ⓐ 3A	6.3VAC 1.2A				
			SEC. 4	SEC. 5				
			6.3VAC ⓐ 1.55A	6.3VAC ⓐ 8.9A				

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	DC RESISTANCE		ARVIN PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.					
T2	190Ω	1050Ω	C22446-1	A-8122		TB0-3 ①	Vert. Block Osc. Trans.
T3	420Ω	22.5Ω	E24127				Horiz. Output Trans
	Tap 40Ω	Tap 17Ω					
		SEC. 2					
		0Ω					
T4	1.2KΩ		C-23657	A-8123			Vert. Output Trans.
	Tap 11.5Ω						
T5A	33.5Ω		AC23816-1				Horizontal Deflection Coil
B	80Ω						Vertical Deflection Coil

① Drill one new mounting hole.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		ARVIN PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T6	2.3KΩ	3.6Ω	198Ω	.7Ω	C23490-1	A-3876 ①	A-2928 ①	R0-2 ①	① Drill one new mounting hole.

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
	FIELD RES.	V. C. IMP.	ARVIN PART No.	JENSEN PART No.	QUAM PART No.	
SP1	77Ω	3.6Ω	E23638		10E77S	
	CONE DIA.	V. C. DIA.				
SP2	9 3/8"	1"				

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA			NOTES
		PRI.	SEC.	ARVIN PART No.	MEISSNER PART No.	IRC PART No.	
L1	Ant. Trans.	.1Ω	.1Ω				} Part of Tuner Part #AE23543-1
L2	Ant. Trans.	.1Ω	.1Ω				
L3	RF Coil	0Ω					
L4	Mixer Grid Coil	0Ω					
L5	Osc. Coil	0Ω					
L6	Osc. Coil	0Ω					
L7	Conv. Plate Coil	.1Ω	.1Ω				
L8	Fil. Choke	.2Ω		A22456		CL-1	.56 Microhenry
L9	1st Video IF	.1Ω	.1Ω	C23546			Includes Trap
L10	Fil. Choke	0Ω		A23095			
L11	2nd Video IF	.1Ω		C23443			Includes Trap
L12	3rd Video IF	.1Ω		C23444			Includes Trap
L13	Grid Choke	1.8Ω		C22500-6			20 Microhenries (Yellow Dot)
L14	Fil. Choke	0Ω		A23095			
L15	4th Video IF	.1Ω		C23445			Includes Trap
L16	Grid Choke	1.8Ω		C22500-8			20 Microhenries (Blue Dot Wound on 12KΩ Resistor)
L17	Sound Trap	0Ω	0Ω	C23821			
L18	5th Video IF	.1Ω		C23446			
L19	Grid Choke	1.8Ω		C22500-8			20 Microhenries (Blue Dot Wound on 12KΩ Resistor)
L20	Peaking	4.3Ω		C22500-4	19-1920 ①		90 Microhenries (Wound on 33KΩ Resistor)
L21	4.5MC Trap	.3Ω		C23670			
L22	Peaking	8Ω		C22500-14	19-1922		250 Microhenries (Violet Dot)
L23	Peaking	10Ω		C22500-13	19-1923 ②		450 Microhenries (Wound on 10KΩ Resistor)
L24	1st Sound IF	1.1Ω		C23448			
L25	2nd Sound IF	2.2Ω	2.2Ω	C23447			
L26	Disc. Trans.	1.7Ω	1.7Ω	C23893			
L27	Horiz. Lock Coil	48Ω		C23449			
L28	Horiz. Lin.	27Ω		C23800			
L29	Width Coil	38Ω	35Ω	C23801			

① Parallel with 33KΩ resistor.
② Parallel with 10KΩ resistor.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				REMARKS
			ARVIN PART No.		LITTELFUSE PART No.		
			FUSE	HOLDER	FUSE	HOLDER	
M1	3AG	.250	A22493		318.250		

MISCELLANEOUS

ITEM No.	PART NAME	ARVIN PART No.	NOTES
M2	RF Tuner	AE23543-1	
M3	Switch	C23685-1	Local - Distant Reception
M4	Switch	A22868	Power Interlock
M5	Focus Magnet	C23910-1	
M6	Ion Trap	C24119-1	
B2	Trimmer	A23655	Horizontal Drive (10-160MMF)
	Safety Glass	E23487	
	Escutcheon	R23549-1	Mahogany
	Escutcheon	R23549-2	Blonde
	Indicator	C23826-1	Channel (Mahogany)
	Indicator	C23826-2	Channel (Blonde)
	Knob	D23602	Channel Selector
	Knob	D23605	Fine Tuning
	Knob	D23604	Contrast
	Knob	D23603	Volume

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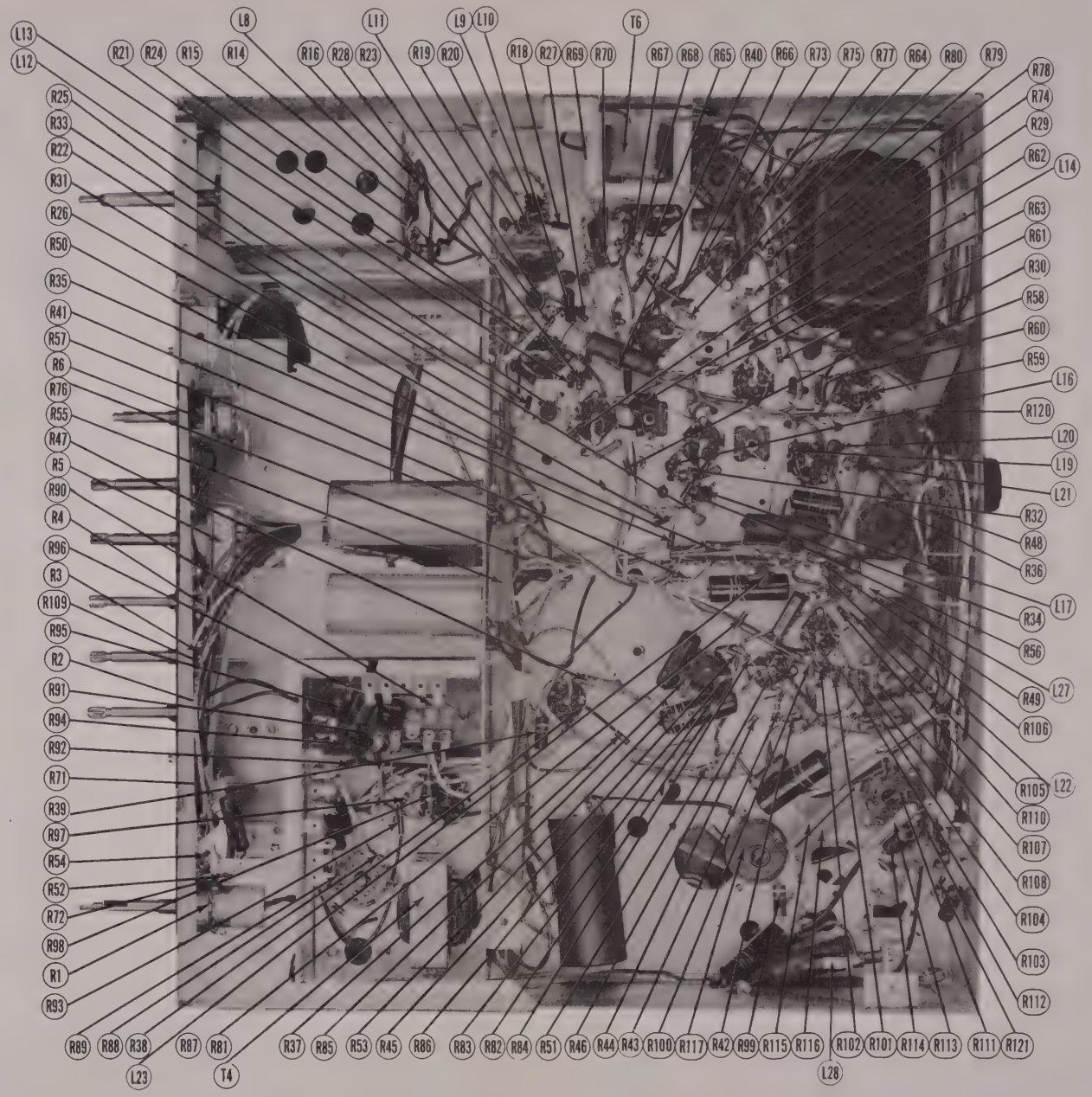

CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

BELL SOUND
MODEL RT-65

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BELL SOUND
MODEL RT-65

BELL SOUND, MODEL RT-65

TRADE NAME	Bell Sound, Model RT-65
MANUFACTURER	Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio
TYPE SET	AC Operated Tape Recorder
TUBES (FOUR)	Types 12AX7 AF Amp., 12AU7 2nd AF - Bias Oscillator, 6V6GT Power Output, 6X5GT Rectifier
POWER SUPPLY	110-120 Volts AC — RATING .33 Amp. @ 117 Volts AC

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PARTS LIST AND DESCRIPTIONS

BELL SOUND
MODEL RT-65

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: BELL-SOUND PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	INSTALLATION NOTES
V1	Pre-amplifier-1st. AF-Phono Amp	12AX7	12AX7	9A	
V2	2nd AF Amplifier-Bias Oscillator	12AU7	12AU7	9A	
V3	Power Output	6V6GT	6V6GT	7AC	
V4	Rectifier	6X5GT	6X5GT	6S	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: BELL-SOUND PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1	40	450		AF8J		UP4045		TVL-1725	Filter
C2A	20	450		AF44J4A		UP2245C		TVL-3739	▲ Filter
B	20	450							■ Filter
C	20	25							Output Cathode
C3A	20	450		AF44J4A		UP2245C		TVL-3739	■ Decoupling
B	20	450							▲ Decoupling
C	20	25							1st AF Amp. Cathode
C4	.05	200		P288-05	DF-503	PTE4S5		2TM-S5	Audio Coupling
C5	510	500		1468-0005	D6-501	5W5T5	GP2K-500	1FM-35	Tone Comp.
C6	.02	600		P688-02	DF-203	PTE6S2		6TM-S2	Audio Coupling
C7	10000			BPD-01	DD-103	PTE6S1	821-01	36C1	Audio Coupling
C8	10000			BPD-01	DD-103	PTE6S1	821-01	36C1	Tone Comp.
C9	.05	600		P688-05	DF-503	PTE6S5		6TM-S5	Audio Coupling
C10	200	500		1469-0002	D6-201	5R5T2	GP2K-200	MS-32	Tone Comp.
C11	.015	600		P688-015		PTE6S15		6TM-S15	Tone Comp.
C12	.05	600		P688-05	DF-503	PTE6S5		6TM-S5	Audio Coupling
C13	.0047	400		P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Osc. Grid Cap.
C14	.05	600		P688-05	DF-503	PTE6S5		6TM-S5	Osc. Plate Dec.
C15	10000	300		1467-01		1D3S1		1FM-11	Fixed Trimmer
C16	10000	300		1467-01		1D3S1		1FM-11	Fixed Trimmer
C17	.002	600		P688-002	D6-202	PTE6D2	GP2M-002	6TM-D2	Output Plate
C18	.001	600		P688-001	D6-102	PTE6D1	GP2L-001	6TM-D1	Indicator Coupling
C19	200	500		1468-0002	D6-201	5W5T2	GP2K-200	1FM-32	Fixed Trimmer
C20	.05	600		P688-05	DF-503	PTE6S5		6TM-S5	Line Filter

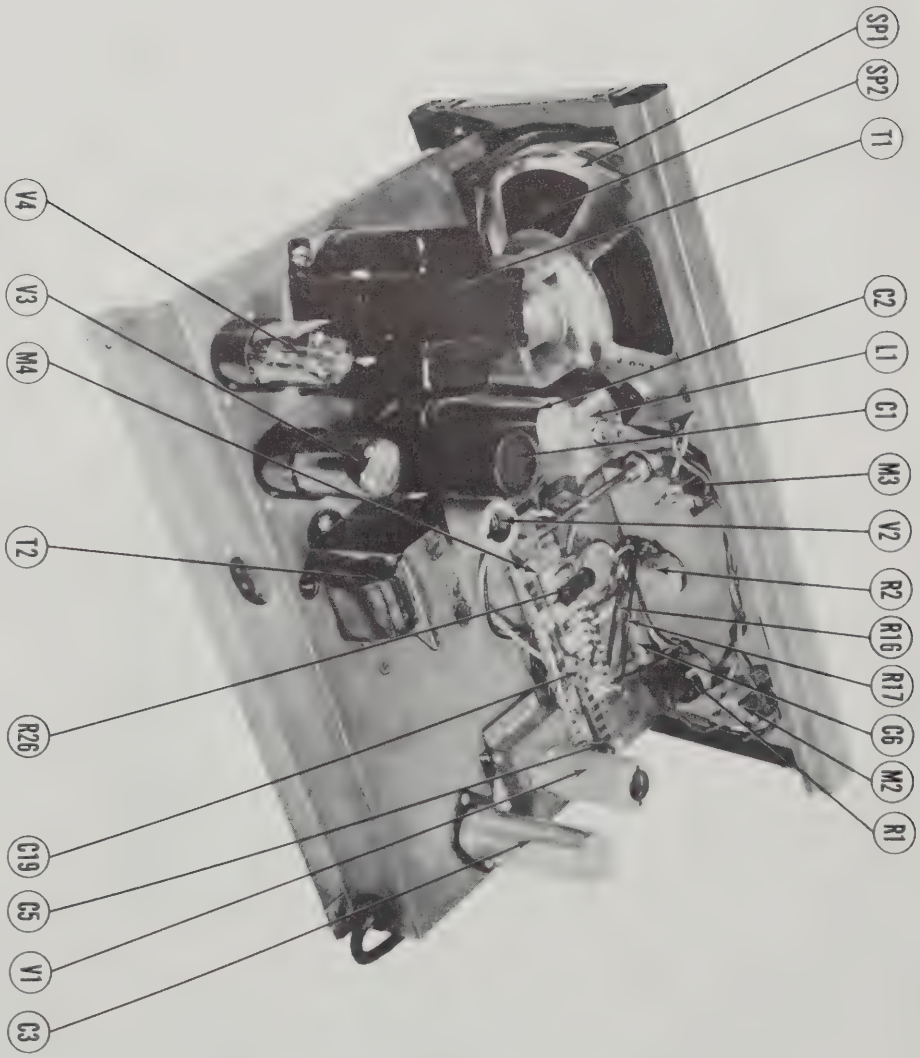
CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: BELL-SOUND PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	INSTALLATION NOTES
R1A	500KΩ	½		Q13-133	AG-60-Z	B-60-S	Tone Control
B	Shaft			Not Req	FS-3	Not Req	Attach to R1A per instructions
C	Switch			76-1	SWB	Not Req	Attach to R1A per instructions
R2A	500KΩ	½		Q13-133	AG-60-Z	B-60	Volume Control
B	Shaft			Not Req	RS-3	Not Req	Attach to R2A per instructions

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: BELL-SOUND PART No.	IRC PART No.	IDENTIFICATION CODES
R3	10Meg	½		BTS-10Meg	Pre-Amp. Grid
R4	470K	½		BTS-470K	Pre-Amp. Plate
R5	3300Ω	½		BTS-3300	1st AF Amp. Cathode
R6	270KΩ	½		BTS-270K	1st AF Amp. Plate
R7	100KΩ	½		BTS-100K	Decoupling
R8	130KΩ	½			Tone Compensation
R9	22KΩ	½		BTS-22K-5%	2nd AF Amp. Grid
R10	130KΩ	½			2nd AF Amp. Grid
R11	1000Ω	½		BTS-1000-5%	2nd AF Amp. Cathode - See Note 1
R12	270KΩ	½		BTS-270K	2nd AF Amp. Plate
R13	39KΩ	½		BTS-39K-5%	Erase Osc. Grid
R14	100KΩ	½		BTS-100K	Erase Osc. Cathode
R15	10KΩ	2		BTB-10K	Erase Osc. Plate
R16	82KΩ	½		BTS-82K	Voltage Divider
R17	100KΩ	½		BTS-100K	Tone Compensation
R18	270KΩ	½		BTS-270K	Output Grid
R19	390Ω	2		BTB-390	Output Cathode - See Note 2

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

R20	270KΩ	½		BTS-270K	Voltage Divider
R21	100KΩ	½		BTS-100K	Tone Compensation
R22	150KΩ	½		BTS-150K	Feedback Network
R23	10KΩ	½		BTS-10K	Isolation
R24	10KΩ	½		BTS-10K	Monitor Shunt
R25	10KΩ	½		BTS-10K-5%	Feedback Network - See Note 3
R26	3Ω	5		1 3/4A-3	Output Transformer Shunt - Wire Wound
R27	270Ω	½		BTS-270	Filament String - See Note 4
R28	56Ω	½		BW-½-56	Filament String - See Note 4
R29	6800Ω	1		BTA-6800	Filter
R30	4700Ω	1		BTA-4700	Filter

Note 1 Some models use 2700Ω Resistor in this application.
Note 2 Some models use 360Ω Resistor in this application
Note 3 Some models use 27KΩ Resistor in this application
Note 4 Some models use 150Ω Resistor in this application

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TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	BELL-SOUND PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC @ .33A	640VCT .047ADC	6.3VAC @ 3.5A		B20203	PC8407		PV-50 ①

① Drill new mounting holes

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		BELL-SOUND PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T2	8KΩ	6.4Ω CT	700Ω	7ΩCT	B20204			RO-13	

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			INSTALLATION NOTES
	FIELD	V. C. IMP.	BELL-SOUND PART No.	JENSEN PART No.	QUAM PART No.	
SP1	PM	3.2Ω	B20111P17	ST108 Model P6-X	6A15	
	CONE DIA.	V. C. DIA.				
SP2	5 15/16"	9/16"				

R F COILS

ITEM No.	USE	DC RES.		REPLACEMENT DATA		
		PRI.	SEC.	BELL-SOUND PART No.	MEISSNER PART No.	
L1	Bias Osc. Coil	12Ω	5Ω	B-13793		

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				REMARKS
			BELL-SOUND PART No.		LITTELFUSE PART No.		
			FUSE	HOLDER	FUSE	HOLDER	
M1	3AG Pigtail	2 Amp.			318002		

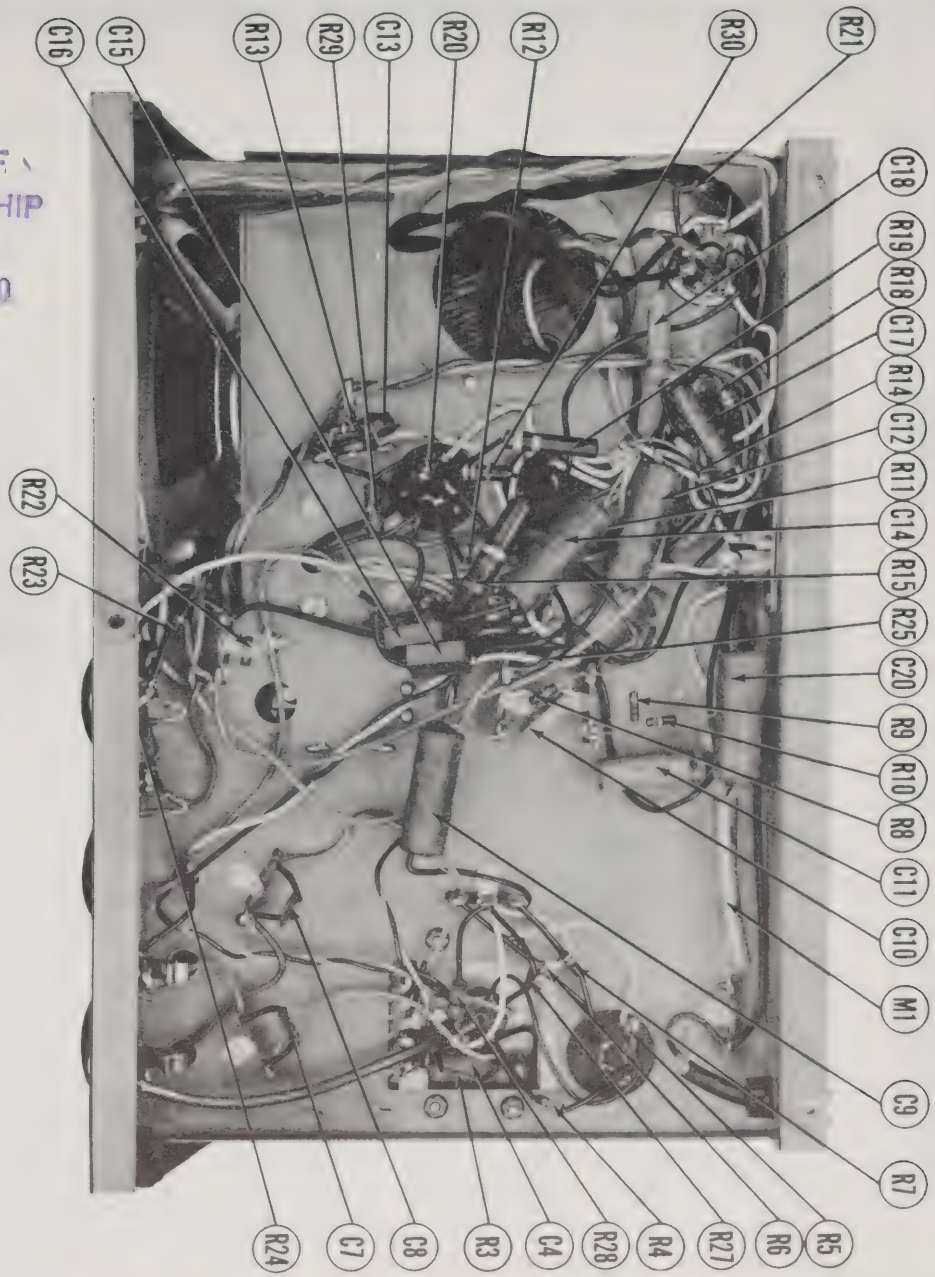
DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					BELL-SOUND PART No.		
M2	Bayonet	6-8	.15	Brown			Type #47

MISCELLANEOUS

ITEM No.	PART NAME	BELL-SOUND PART No.	NOTES
M3	Neon Indicator		Type NE-51
M4	Switch	B-13053P4	Play-Record

CHASSIS—BOTTOM VIEW

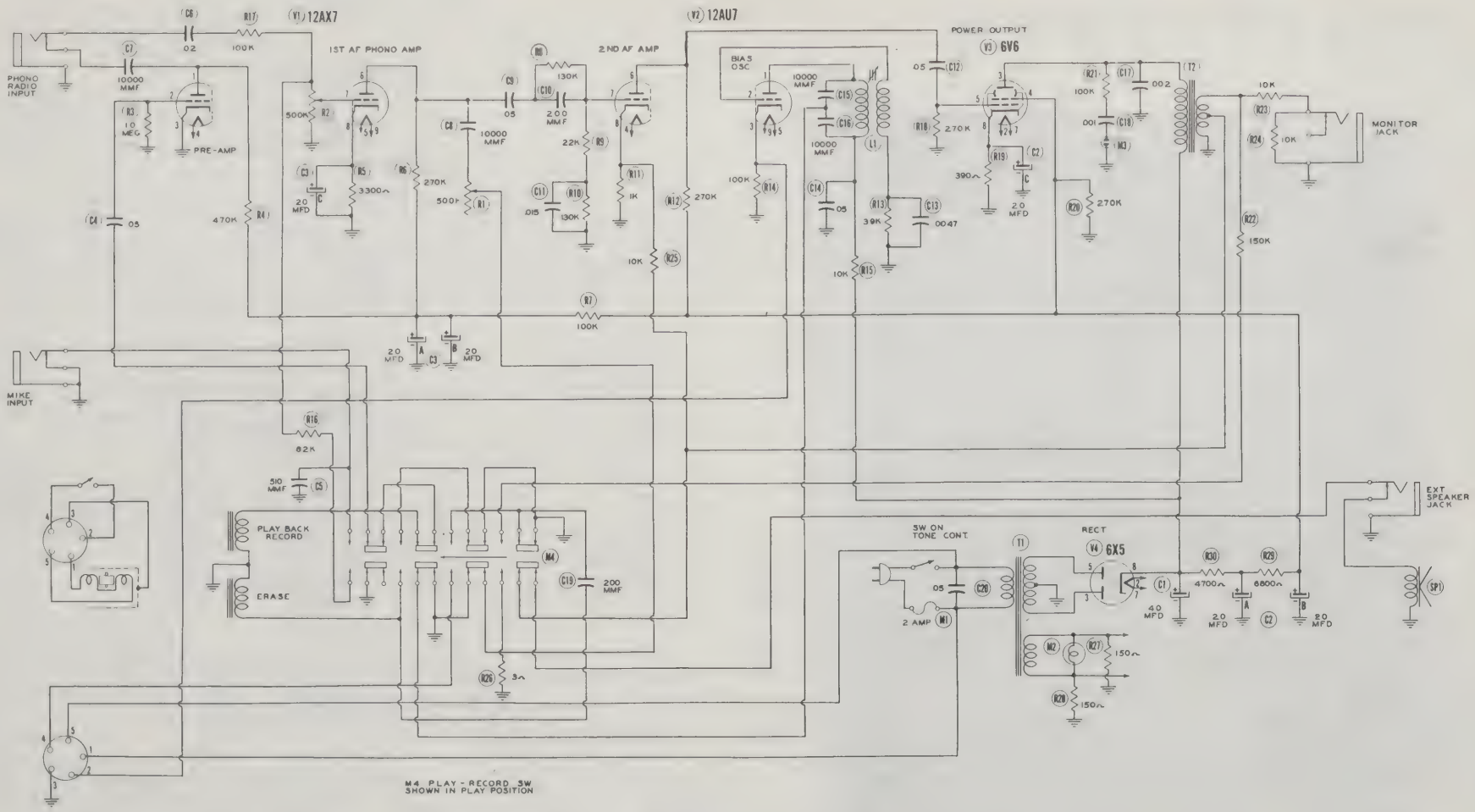


SET 130

FOLDER 4

BELL SOUND MODEL RT-65

BELL SOUND MODEL RT-65



VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	12AX7	75VDC	6VDC	0V	¶	¶	95VDC	0V	1.2VDC	¶
V 2	12AU7	350VDC	0V	25VDC	¶	¶	30VDC	0V	1VDC	¶
V 3	6V6GT	0V	¶	330VDC	290VDC	0V	0V	¶	16VDC	
V 4	6X5GT	0V	¶	310VAC	0V	310VAC	0V	¶	350VDC	

¶ 6.3VAC MEASURED ACROSS FILAMENTS

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	12AX7	†580KΩ	10Meg	0Ω	45Ω	45Ω	†380KΩ	0Ω	3.3KΩ	45Ω
V 2	12AU7	110KΩ	39KΩ	100KΩ	45Ω	45Ω	†280KΩ	150KΩ	1KΩ	45Ω
V 3	6V6GT	0Ω	45Ω	†700Ω	11KΩ	270KΩ	Inf.	45Ω	390Ω	
V 4	6X5GT	0Ω	45Ω	340Ω	Inf.	340Ω	Inf.	45Ω	80KΩ	

† MEASURED FROM PIN 8 OF V4

THE COOPERATION OF THE MANUFACTURER OF THIS EQUIPMENT MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

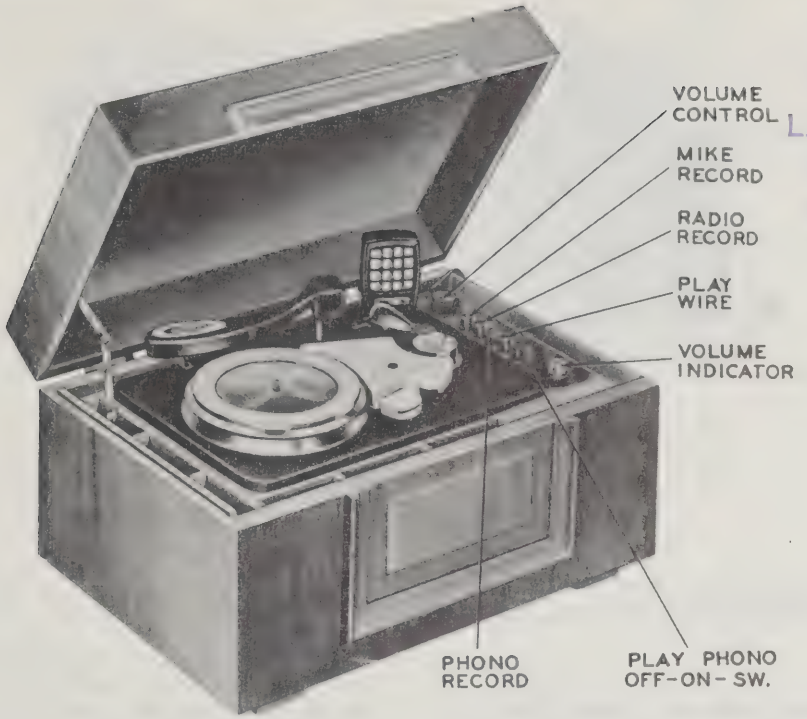

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Figure 1

GENERAL INFORMATION

The Crescent H-1A Series Wire Recorder is a combination record player and magnetic record-reproducer. The Crescent uses a standard spool of .004 or .0036 stainless steel wire which gives approximately an hour of continuous recording. The recording may be played back immediately after the wire has been rewound. A recording will last indefinitely since the play-back process has no effect on the wire; or a new recording may be made on an old spool since, in the recording process, any previous recording is erased. The turntable serves as a turntable for standard records as well as the takeup spool for the recording mechanism.

A plastic tape leader is attached at each end of the wire, one of which is used to thread the wire on the turntable or the storage spool, and the other to trip the reset switch to shut off the motor at the end.

Manufactured By:

CRESCENT INDUSTRIES, INC.
5900 Touhy Avenue
Chicago 31, Illinois

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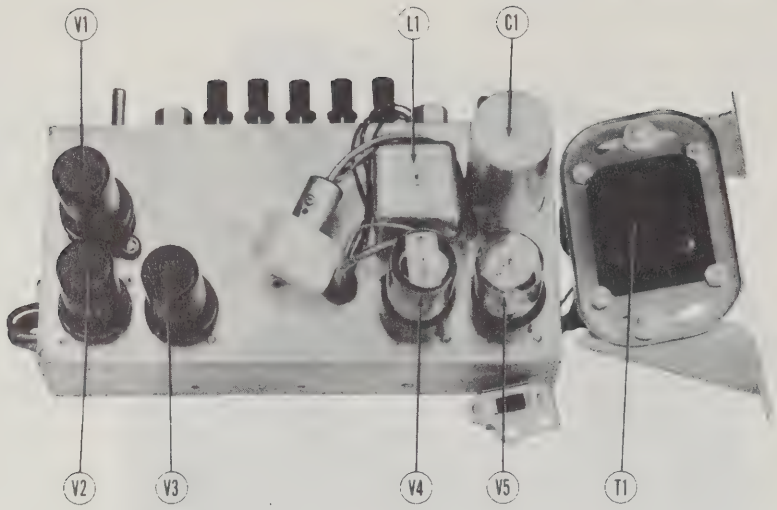


Figure 2

OPERATING

Reset Button

The reset button operates a switch that is in series with the driving motor. The mechanism will not operate until this button is depressed. At each end of the recording wire, a plastic tape leader is attached. These leaders are used to thread the wire on the turntable or storage spool; also, at the end of the wire travel, the tape leader passes under a trip arm which actuates an automatic switch. This causes the reset button to pop up and automatically shut off the mechanism. Before the mechanism will operate again, the reset button must be depressed.

Threading Wire on the Mechanism

Proper threading of the wire on the machine is important, as "wows" may result from improper procedure:

(a) Be sure the reset button is depressed.

(b) The recording head should be brought to its top position before the wire is placed on the mechanism. This may be done by turning the mechanical switch to "Rewind," and then turning it to "Off" when the head is at the top of its travel.

(c) Place the spool, label-side up, over the hub, or so that the wire feeds from the outside edge of recorder and the spool rotates clockwise, and press down on the spool until it is firmly seated. Loosen the end of the plastic leader from the spool and carefully pull it past the recorder head. While holding the leader against the inner surface of the channel, rotate the turntable, by hand, until two complete turns of wire are in the channel. The full length of the leader must be pressed smoothly against the inner surface of the channel or speed variations will result.

Safety Button

In order to put the switch into "Record" position, the button immediately to the right of the switch must be depressed. This safety feature is provided to prevent accidental erasure of recording over a program you wish to keep.

To Record from Microphone

(a) Plug microphone into the jack on the top of the recorder mounting plate marked "Mike Input."

(b) Depress the pushbutton marked "Record Mike."

(c) Turn the recording level control full counterclockwise.

(d) Make certain that the "Reset" button is depressed.

(e) Turn the mechanical switch to "Record."

(f) Turn the recording level control clockwise until the recording level indicator just flashes on the peaks, or loudest portion of the noises, or sounds in the room.

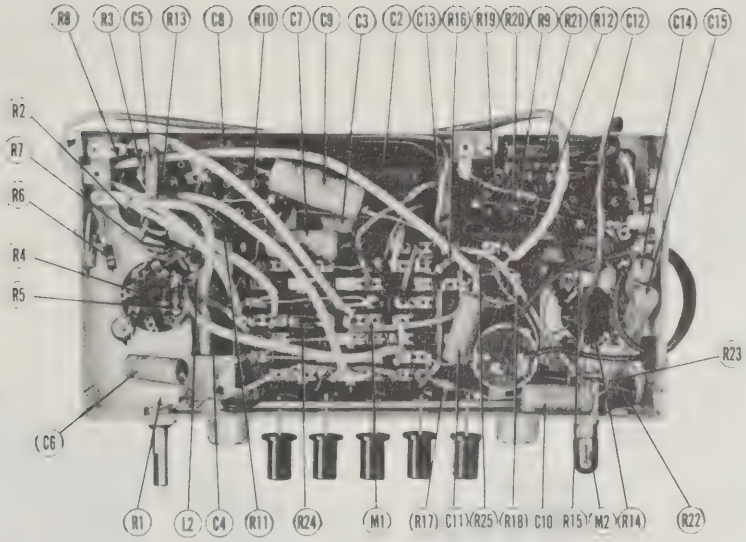
To Record from Disc Records

(a) Depress the pushbutton marked "Record Phono." Be sure that you do not wish to keep any program which may already be on the wire as it will be erased automatically in the recording process.

(b) Turn the recording level indicator full counterclockwise.

(c) Check the "Reset" button to see if it is depressed.

(d) Place disc record on the turntable.



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L. F. BLANKENSHIP
3824 MEADE ST
DENVER, COLORADO

Figure 3

(e) Turn the mechanical switch to the "Record" position.

(f) Set the tone arm on the record.

(g) Turn the recording level control clockwise until the indicator lamp flashes only on the extreme loud peaks of the record. The disc record is now being recorded on the wire. The record may be heard while it is being recorded by adjusting the volume and tone controls located on the sloping front panel. Adjustment of these controls does not affect the recording in any way.

To Record from Radio

(a) The cable connections described under the heading "Connections to Radio" must be made before radio programs can be recorded.

(b) Thread a spool of wire on the recorder.

(c) Tune in the program you wish to record on your radio.

(d) Turn the selector switch to "Record Radio."

(e) Check the "Reset" button to see if it is depressed.

(f) Turn the level-control full counter-clockwise.

(g) Turn the mechanical switch to "Record."

(h) Turn the level-control clockwise until the indicator lamp flashes on the extreme loud peaks of the radio program.

You are now recording the radio program. You may adjust the volume and tone controls of the radio in any way without affecting what is being recorded. Do not re-tune the radio while recording the program as this will adversely affect the quality of the recording.

To Play Wire Recordings

Thread the wire on mechanism as previously described; or if the program has just been recorded, place the mechanical switch in "Rewind" and allow the machine to rewind back to the beginning of the program. Depress the "Play Wire" pushbutton. Turn the mechanical switch to "Play." Adjust the volume and tone controls to suit your ear just as you would in listening to a radio program.

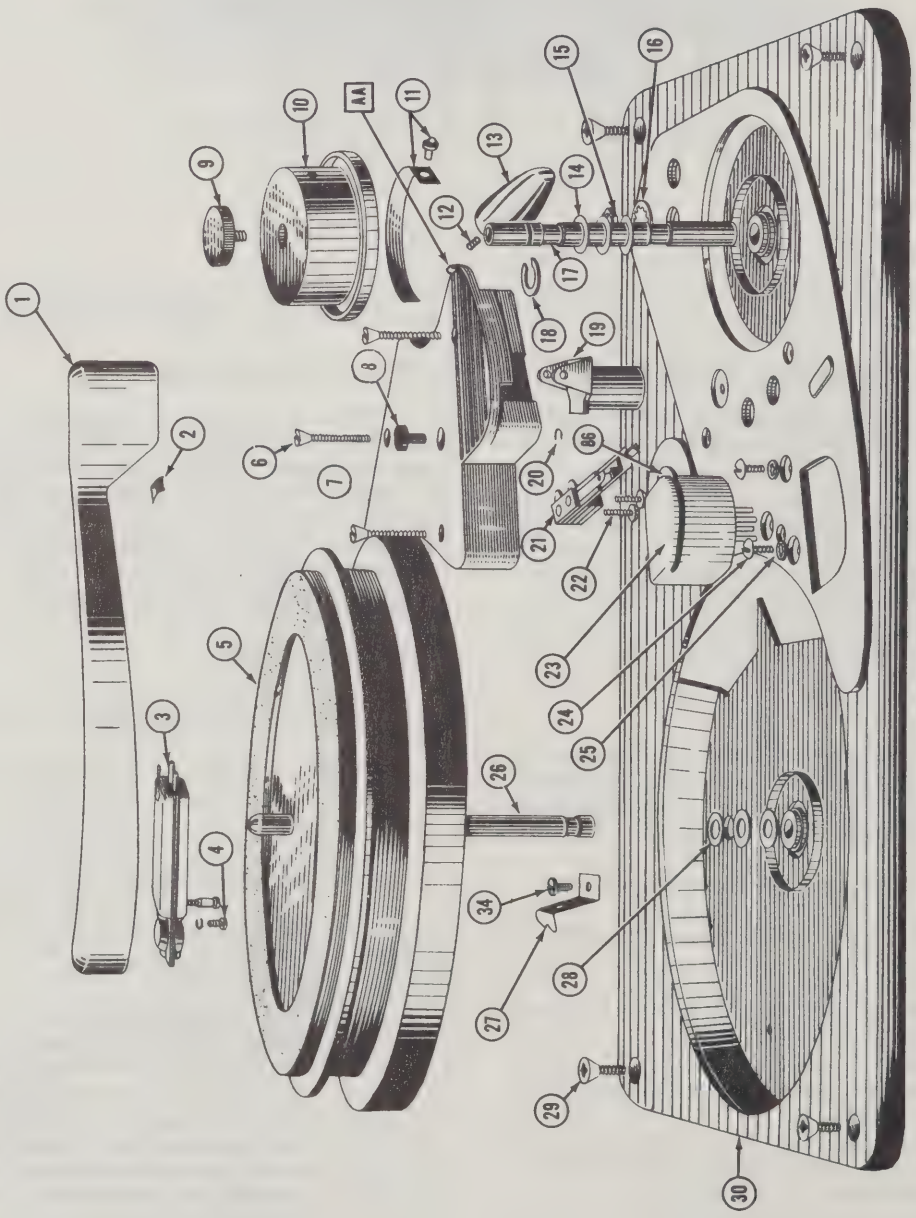
Connections to Radio

Three six-foot shielded cables are supplied with the wire recorder as follows:

1 - A cable fitted with a plug on each end. This cable enables you to play back wire recordings through the audio system of your radio. Plug one end of the cable into the receptacle marked "High Output" on the side of the wire recorder, and insert the other plug into the "Phono Jack" of your radio.

2 - A cable furnished with a phono plug on one end and a phono jack on the other end. This cable allows your phonograph to operate in the regular way. Insert the plug end into the "Low Output" jack of the recorder, and insert the phono plug from your record changer, which you removed from your radio, into the jack on the other end of the cable.

3 - A cable which has a plug on one end and is left bare on the other end. This cable enables you to record from your radio without the use of a microphone. The bare end of this cable should be soldered to the top or high audio voltage side of the volume control of your radio (see Figure 6).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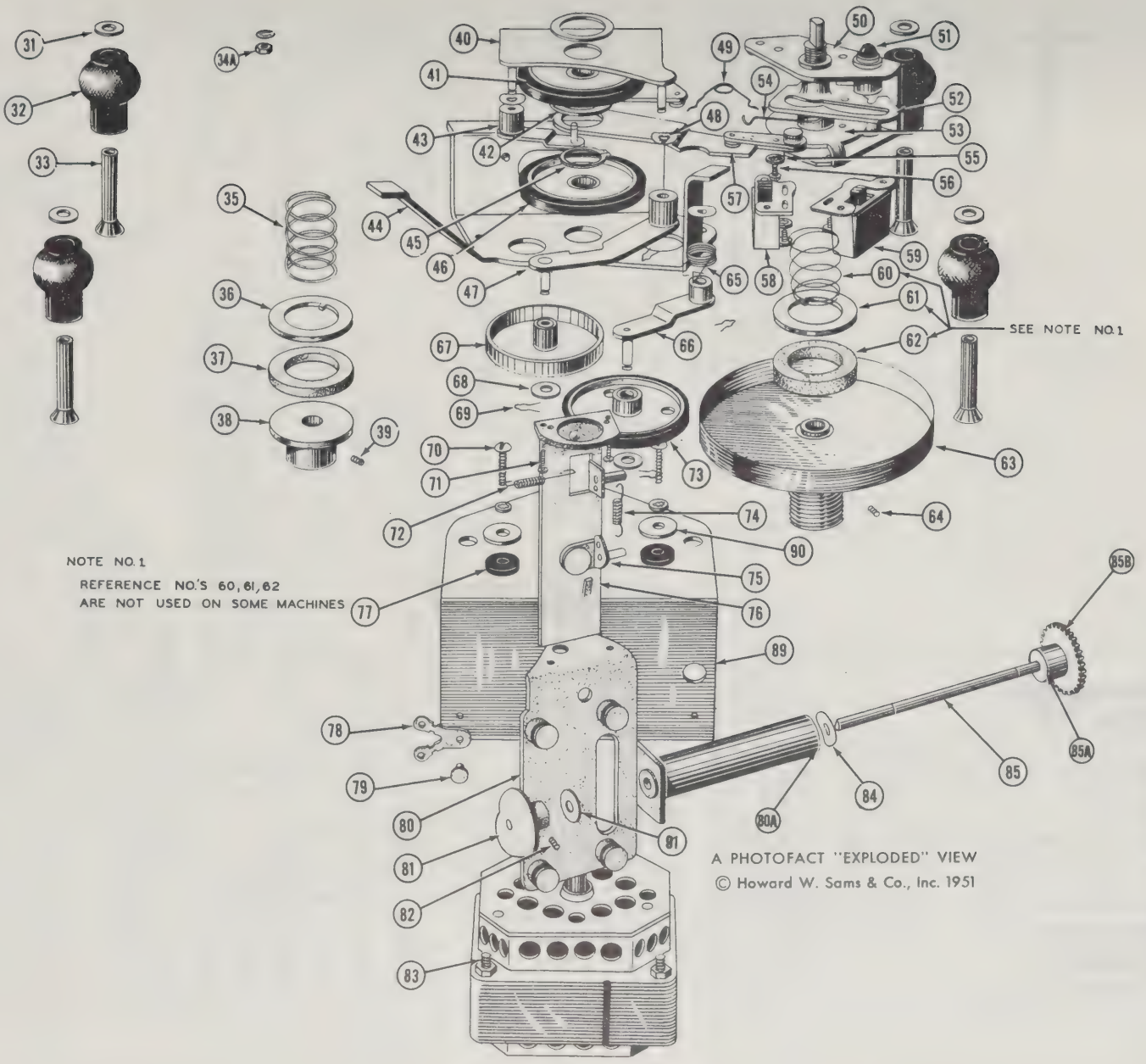

NOTE NO. 1

REFERENCE NO.'S 60, 61, 62
ARE NOT USED ON SOME MACHINES

A PHOTOFACT "EXPLODED" VIEW

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WR37-C

MANUFACTURERS' TYPE RECORDING HEAD

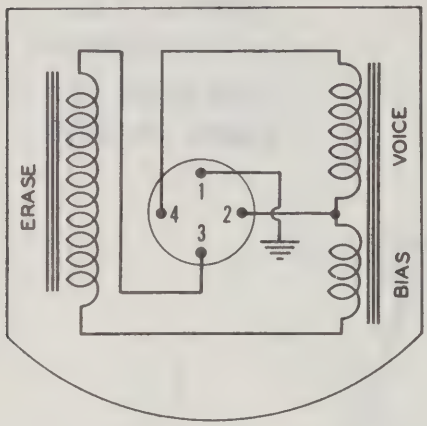

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Figure 4

This terminal is the extreme clockwise terminal of the volume control. The other end of the cable should be plugged into the receptacle marked "Radio Input" on the side of the wire recorder.

This wire recorder is capable of recording from the microphone, or from its own phonograph, and of playing back through its own speaker without using either of the two connections to the radio. The first of these connections will allow you to take advantage of a more elaborate audio system, such as the system built into your console-type radio or individual amplifier system, when the recorder is not being used in portable work. The second cable, soldered to the top of the volume control, may be omitted, if desired, and radio programs may be recorded through the microphone. Recordings obtained through use of a microphone will not be equal, in quality, to results obtained if the recording connection is made through the volume control of your radio set.

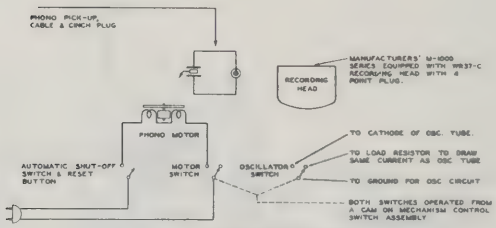
PHONO PICK-UP, CABLE & CINCH PLUG
RECORDING HEAD
MANUFACTURERS' M-1000 SERIES EQUIPPED WITH WR37-C RECORDING HEAD WITH 4 POINT PLUG.
PHONO MOTOR
TO CATHODE OF OSC. TUBE.
TO LOAD RESISTOR TO DRAW SAME CURRENT AS OSC TUBE
TO GROUND FOR OSC CIRCUIT
AUTOMATIC SHUT-OFF SWITCH & RESET BUTTON
MOTOR SWITCH
OSCILLATOR SWITCH
BOTH SWITCHES OPERATED FROM A CAM ON MECHANISM CONTROL SWITCH ASSEMBLY

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Figure 5

To Rewind

After the wire has reached the end, the plastic leader passes under the trip arm, which, in turn, shuts off the Mechanism.

Note: All measurements made in play-back position unless otherwise stated.

VOLTAGE READINGS

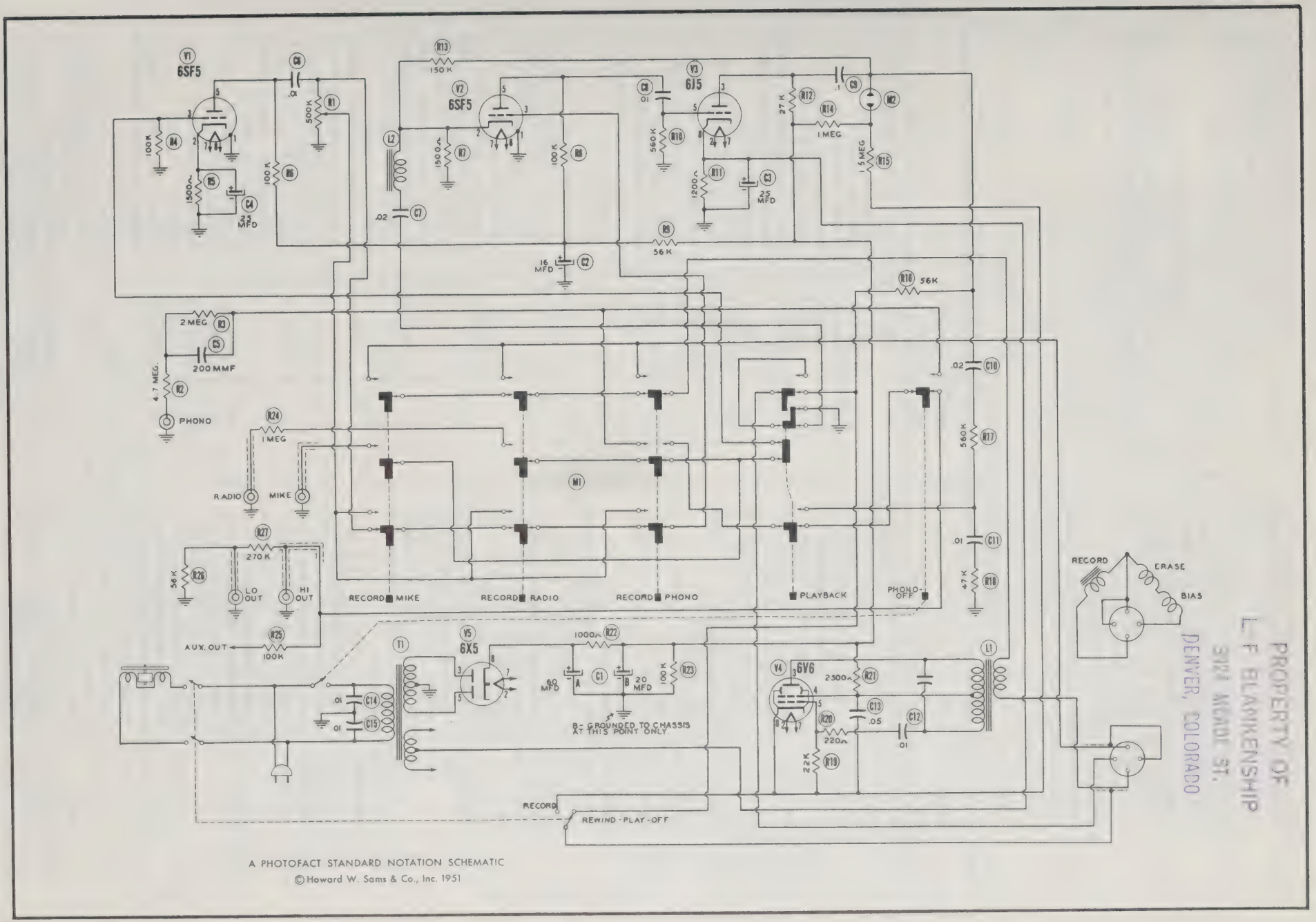
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6SF5	0V	1.4VDC	0V	0V	140VDC	0V	#	#
V 2	6SF5	0V	1.5VDC	.1VDC	225VDC	125VDC	.4VDC	#	#
‡ V 3	6J5	0V	#	180VDC	0V	0V	0V	#	6.3VDC
V 4	6V6GT	0V	#	180VDC	180VDC	§-26VDC	0V	#	0V
V 5	6X5GT	0V	#	260VAC	330VDC	260VAC	330VDC	#	340VDC

§ Taken with vacuum tube voltmeter.
# 6.3VAC measured across filaments.
‡ Measurements taken in record position.

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6SF5	0Ω	1.5KΩ	500Ω	Inf.	†150KΩ	Inf.	1.2KΩ	1.2KΩ
V 2	6SF5	0Ω	1.5KΩ	500KΩ	†55KΩ	†150KΩ	40KΩ	1.2KΩ	1.2KΩ
V 3	6J5	0Ω	1.2KΩ	†27KΩ	Inf.	560KΩ	0Ω	1.2KΩ	1.2KΩ
V 4	6V6GT	2 Meg.	1.2KΩ	†3.5KΩ	†3.5KΩ	2 Meg.	0Ω	1.2KΩ	2 Meg.
V 5	6X5GT	0Ω	1.2KΩ	150Ω	2 Meg.	160Ω	Inf.	1.2KΩ	60KΩ

† Measured from pin 8 of V5.



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DENVER, COLORADO

CRESCENT
MODEL H-1A

(a) To rewind, take the plastic leader from the turntable channel and carefully pull it past the recorder head.

(b) Place the leader in the channel of the storage spool and rotate, by hand, until several turns of wire are in the channel. Make sure the plastic leader is pressed smoothly against the back wall of the channel, as any variation of this diameter will cause "Wows" when you record or play the wire again.

(c) Turn control switch to "Rewind" and press "Reset" button. When the wire has rewound completely, the plastic leader will pass under a trip arm which actuates the trip arm, and, in turn, shuts off the mechanism.

MECHANICAL UNIT

For further information covering the mechanical unit, please refer to the service manual on the Crescent "1000 Series Revised Recorder Mechanism."

MECHANICAL PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1	WR21-B	Pickup arm and pivot spring assembly (used on CWR30 & E1000 series)
	WR50	Pickup arm and pivot spring assembly (used on C1000 & M1000 series)
2	4W13-A	Spring clip (used on CWR 30 & E1000 series)
	4W16	Spring clip (used on C1000 & M1000 series)
3	7W45-A-1	Pickup cartridge - P-92B Shure Bros.
	7W45-A-2	Pickup cartridge - L-70 Astatic
	8W202	Pickup cartridge - P-30S Shure Bros.
	7W29-A	Phono lead
	6W13-A	Needle screw for pickup cartridge
4	6W7-A	Screw (4-40 x 1/4 R.H.M.S.)
5	WR28-B	Turntable assembly (including Ref. No. 26)
6	6W6-A	Screw (6-32 x 1" Phillips Head M. S.)
	WR27-B	Automatic switch assembly (including Ref. Nos. 7, 8, 20, 21 and 22; also the following parts not identified by a reference number)
	WR35-A	Switch bracket and arm assembly (part of auto. switch assembly)
	2W41-A	Switch bushing (part of auto. switch assembly)
	1W14-A	Switch cover (part of auto. switch assembly)
7	3W2-C	Switch housing (part of auto. switch assembly)
8	3W4-A	Switch button (part of auto. switch assembly)
9	2W9-A	Hub lock screw (part of rewind spool hub assembly)
10	WR11-A	Rewind spool hub assembly (including Ref. Nos. 9, 10, 11, and 17)
11	4W6-A	Hub spring (part of rewind spool assembly)
	2W20-A	Hub insert (part of rewind spool assembly)
12	6W1-A	Screw (8-32 x 1/8 Allen Head M. S.)
13	3W5-A	Control knob
14	5W4-A	Fiber washer
15	7W15-A	Hex nut (3/8-32)
16	5W15-A	Lockwasher (3/8 I.T.)
17	WR20	Shaft assembly (part of rewind spool hub assembly)
18	5W3-A	Hub thrust washer
19	1W20-A	Arm support bracket (part of 30)
20	4W11-A	Retaining spring (part of auto. switch assembly)
21	WR22-A	Automatic switch (part of auto. switch assembly)
22	6W11-A	Screw (6-32 x 1/2 R.H.M.S.) (part of auto. switch assembly)
23*	WR37-C	Recording head (Crescent) (Identify by metal - shield on top only) (Manufacturer's model with 4-prong plug)
	WR45-C	Recording head (Crescent) (Identify by - metal shield on top only) (Distributor's model with 5-prong plug)
	7W36-C	Recording head spacer (used on Crescent head only)
*	7W28-C	Recording head (St. George) (Identify by - no metal shields and two ridges on top of head)
*	7W20-C	Recording head (Lear) (Identify by - metal shield on top and bottom)
24	6W5-A	Screw (8-32 x 3/8 R.H.M.S.)
25	5W13	Lockwasher (No. 8 I.T.)
26	2W43-A	Turntable shaft (part of Ref. No. 5)
27	3W6-A	Pickup arm rest. Plastic Type (used on CRW30 & E1000 series)
	1W37-A	Pickup arm rest. Spring Clip Type (used on C1000 and M1000 series)
28	5W4-A	Fiber Washer
29	6W9-A	Screw (10-32 x 1/2 Phillips flat head)

REF. NO.	PART NO.	DESCRIPTION
30	WR38-A	Mounting board assembly (including Ref. 19)
31	5W16-A	Flat Washer
32	7W18-A	Rubber Mount
33	2W44-A	Mounting Stud
34	6W10	Screw (pickup arm rest) (No. 6 x 3/8 S.M.S.) (used on CWR30 & E1000 series)
	6W14	Screw (6-32 x 3/8 R.H.M.S.)
34A	7W51	Nut (6-32) (used on C1000 and M1000 series)
35	4W5-A	Turntable spring
36	5W2-A	Keyed washer
37	5W1-A	Felt washer (turntable)
38	2W12-A	Turntable support
39	6W1-A	Set screw (8-32 x 1/8 Allen head)
40	WR15-A	Bracket and post assembly
41	WR9-B	Idler drive pulley
42	5W11-A	Flat washer
43	WR14-A	Drive link assembly
44	1W24-B	Motor mounting bracket (Part of 30)
45	7W10-A	Retainer ring
46	WR10-B	Motor drive pulley
47	WR12-A	Rewind link assembly
48	5W8-A	Friction washer
49	4W3-A	Drive control spring
50	WR2-B	Switch assembly (including 51,52,53, and 87)
51	WR3-A	Record button assembly (part of 50)
52	WR6-A	Cam lever assembly (part of 50)
53	WR5-A	Switch lever assembly (part of 50)
54	4W9-A	Retainer spring
55	5W6	Lockwasher (No. 6 I.T.)
56	6W8	Adjusting screw (6-32 x 5/32 R.H.M.S.)
57	WR18-A	Arm and link assembly
58	WR7-A	On-off switch assembly
59	WR8-A	On-off switch assembly
60**	4W4-A	Rewind pulley spring
61**	5W2-A	Keyed washer
62**	5W19-A	Felt washer (rewind)
63	WR26-A	Rewind pulley assembly
64	6W1-A	Set screw (8-32 x 1/8 Allen Head)
65	4W12-A	Coil spring
66	WR13-A	Rewind link assembly
67	WR19-A	Pulley and bushing assembly
68	5W7-A	Cloth washer
69	7W9-A	Spring clip
70	6W3-A	Motor mounting screw (8-32 x 5/8 R.H.M.S.)
71	6W7-A	Screw (4-40 x 1/4 R.H.M.S.)
72	4W8-A	Level wind spring
73	WR9-B	Idler drive pulley
74	4W7-A	Tension spring
75	WR33-A	Follower assembly (part of 76)
76	WR31-A	Level wind slide assembly
77	7W19-A	Rubber grommet
78	1W8-A	Solder lug
79	7W2-A	Rivet
80	WR36-A	Level wind frame and housing assembly
81	3W7-A	Level wind cam
82	6W1-A	Set screw (8-32 x 1/4 Allen Head)
83	7W13-B-1) 7W13-B-2)	Motor, complete; 105-125 volts, 60 cycles (Motor 7W13-B-1 and 7W13-B-2 are interchangeable)
	7W31-B-1) 7W31-B-2	Motor, complete; 220 volts, 60 cycles (Motor 7W31-B-1 and 7W31-B-2 are interchangeable)
	7W32-B-1 7W32-B-2	Motor, complete; 105-125 volts, 50 cycles (Motor 7W31-B-1 and 7W32-B-2 are interchangeable) (WR-60-Bushing and Set Screw Assembly must be used on 50-cycle Motors)
	7W33-B-1 7W33-B-2	Motor, complete; 220 volts, 50 cycles (Motor 7W33-B-1 and 7W33-B-2 are interchangeable). (WR-60-Bushing and Set Screw Assembly must be used on 50-cycle Motors)
84	5W8-A	Friction washer
85	WR32-A	Level wind shaft and gear assembly
86	2W45-A	Plug button
87	4W2-A	Compression spring (part of 50)
88	6W3-A	Adjusting screw (8-32 x 5/8 R.H.M.S.)
89	1W22-B	Motor plate
90	5W5-A	Flat washer
91	5W17-A	Flat washer
92	WR-60	Bushing and Set Screw Assembly (used for 50-cycle operation)
	WT1-A	Motor Alignment Tool

* It is recommended that recording heads be returned to a Crescent distributor for identification, to insure proper replacement.

When ordering parts that have an enamel finish, the color should be specified, to insure proper replacement.

** Reference numbers 60,61, and 62 are not used on some machines.

ELECTRICAL PARTS LIST

ITEM NO.	PART NO.	USE AND DESCRIPTION
V1	10W101	6SF5 1st AF Amplifier
V2	10W101	6SF5 2nd AF Amplifier
V3	10W102	6J5 3rd AF Amplifier
V4	10W103	6V6GT Oscillator
V5	10W104	6X5GT Rectifier

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ITEM NO.	PART NO.	USE AND DESCRIPTION
C1A,B	12W101A	Filter (Electrolytic), 60-20 Mfd. @ 450 V.
C2	12W103	Decoupling (Electrolytic), 16 Mfd. @ 450 V.
C3	12W102A	3rd AF Cathode Bypass (Electrolytic), 25 Mfd. @ 25 V.
C4	12W102A	1st AF Cathode Bypass (Electrolytic), 25 Mfd. @ 25 V.
C5	8W103A	Tone Compensation, 200 Mmf. @ 500 V.
C6	12W105A	Audio Coupling, .01 Mfd. @ 400 V.
C7	12W107A	Tone Compensation, .02 Mfd. @ 400 V.
C8	12W105A	Audio Coupling, .01 Mfd. @ 400 V.
C9	12W106A	Audio Coupling, .1 Mfd. @ 400 V.
C10	12W107A	Tone Compensation, .02 Mfd. @ 400 V.
C11	12W105A	Tone Compensation, .01 Mfd. @ 400 V.
C12	12W105A	Oscillator Grid Cap, .01 Mfd. @ 400 V.
C13	12W104	Oscillator Screen Bypass, .05 Mfd. @ 400 V.
C14	12W105A	Line Filter, .01 Mfd. @ 400 V.
C15	12W105A	Line Filter, .01 Mfd. @ 400 V.
R1	11W101A	Recording Level Control, 500 K Ohms
R2		Tone Compensation, 4.7 Megohms, 1/2 Watt
R3	11W102A	Tone Compensation, 2 Megohm, 1/2 Watt
R4	11W102-8	1st AF Grid, 100k ohm, 1/2 Watt
R5	11W102-1	1st AF Cathode, 1500 Ohm, 1/2 Watt
R6	11W102-8	1st AF Plate, 100K Ohm, 1/2 Watt
R7	11W102-1	2nd AF Cathode, 1500 Ohm, 1/2 Watt
R8	11W102-8	2nd AF Plate, 100K Ohm, 1/2 Watt
R9	11W102-9	Decoupling, 56K Ohm, 1/2 Watt
R10	11W102-7	3rd AF Grid, 560K Ohm, 1/2 Watt
R11	11W102-2	3rd AF Cathode, 1200 Ohm, 1/2 Watt
R12	11W105-2	3rd AF Plate, 27K Ohm, 1 Watt
R13	11W102-6	Feedback, 150K Ohm, 1/2 Watt
R14	11W102-5	Series Neon, 1 Megohm, 1/2 Watt
R15	11W102-14	Series Neon, 1.5 Megohm, 1/2 Watt
R16	11W102-9	Voltage Divider, 56K Ohm, 1/2 Watt
R17	11W102-7	Tone Compensation, 560K Ohm, 1/2 Watt
R18	11W102-11	Tone Compensation, 47K Ohm, 1/2 Watt
R19	11W102-3	Oscillator Grid, 22 K Ohm, 1/2 Watt
R20	11W102-4	Parasitic Suppressor, 220 Ohm, 1/2 Watt
R21	11W103-2	Oscillator Screen, 2500 Ohm, 10 Watt
R22	11W102-1	Filter, 1000 Ohm, 10 Watt
R23		Bleeder, 100K Ohm, 2 Watt
R24	8W101A	Tone Compensation, 1 Megohm, 1/2 Watt
R25	11W102-8	Tone Compensation, 100K Ohm, 1/2 Watt
T1	13W103	Power Transformer
L1	13W101A	Oscillator Coil, 30KC
L2	13W102	Peaking Coil, 20 Millihenry
M1	7W105B	Push-Button Switch Assembly
M2	10W105	Neon Lamp

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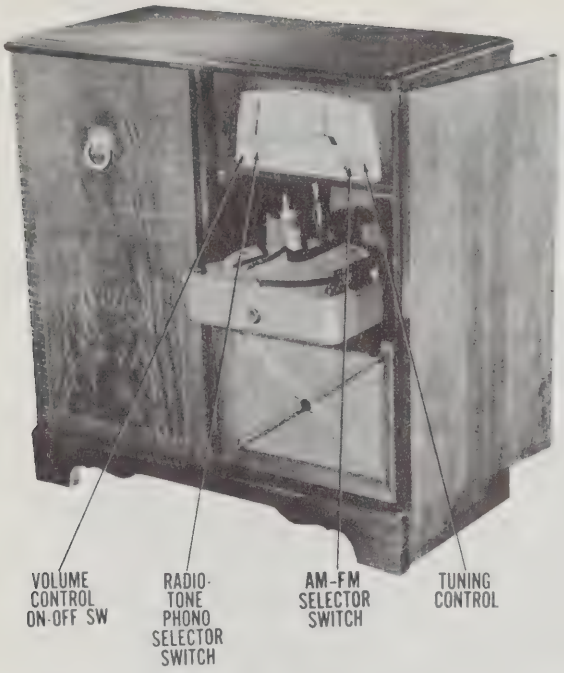
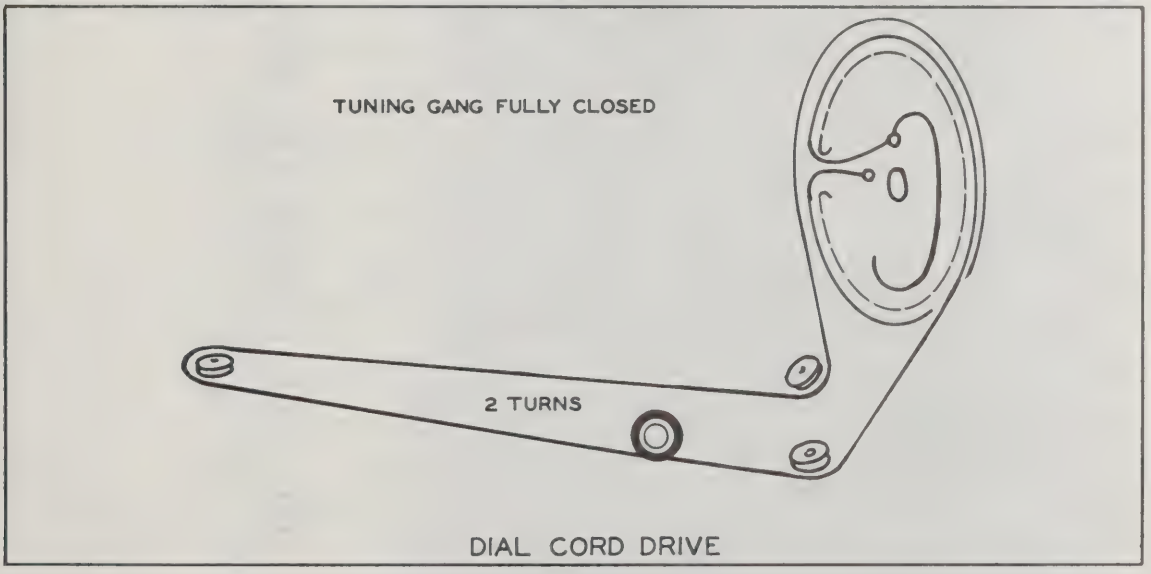
5924 MEADE ST.
DENVER, COLORADO



GENERAL ELECTRIC MODEL 755

TRADE NAME	General Electric, Model 755
MANUFACTURER	General Electric Corp., Electronics Park, Syracuse, New York
TYPE SET	AC Operated Combination Phono - Radio, Superheterodyne Receiver with Loop Ant.
TUBES (ELEVEN)	Types 6BA6 RF Amp., 12AT7 FM Mixer - Oscillator, 6BA6 AM Mixer - 1st FM IF Amp., 6BA6 1st AM - 2nd FM IF Amp., 6AU6 Limiter, 6T8 Det.-AVC-AF, 6AU6 Phono Pre-Amp., 6J5 Phase Inv., (2) 6V6GT Power Output, 5Y3GT Rectifier
POWER SUPPLY	105-125 Volts AC — RATING .725 Amp. @ 117 Volts AC
TUNING RANGE—BROADCAST	540-1600KC — FREQ. MOD. 88-108MC

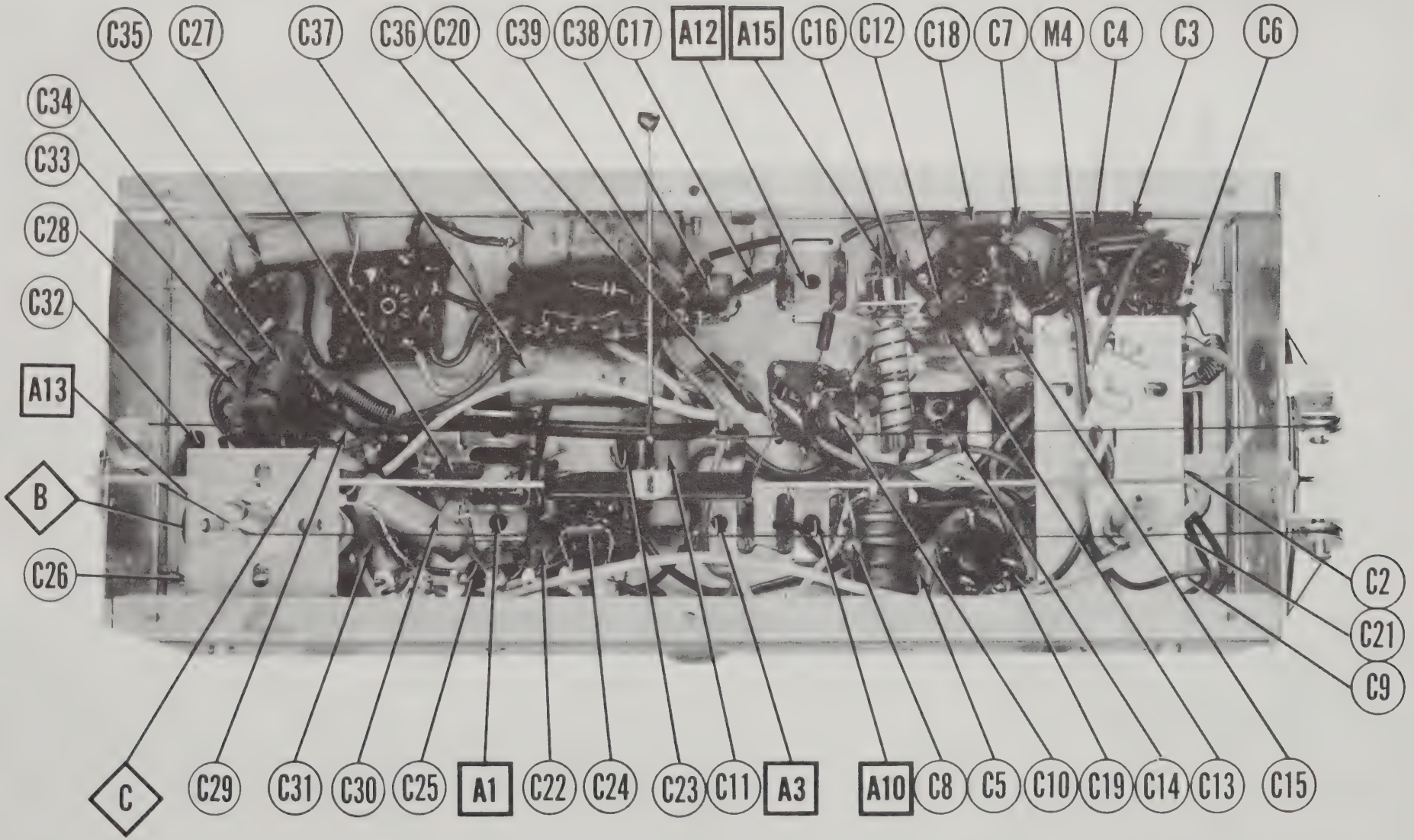
FOR SERVICE INFORMATION ON RECORD CHANGER SEE MILWAUKEE ERWOOD MODEL 11600 IN PHOTOFACT SET 72 FOLDER 7 OR RECORD CHANGER MANUAL CM-3.



DIAL CORD DRIVE

GENERAL ELECTRIC
MODEL 755

"The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed." "Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. Copyright 1951 by Howard W. Sams & Co., Inc., Indianapolis, Indiana, U. S. of America. Copyright under International Copyright Union. All rights reserved under Inter-American Copyright Union (1910) by Howard W. Sams & Co., Inc." Printed in U. S. of America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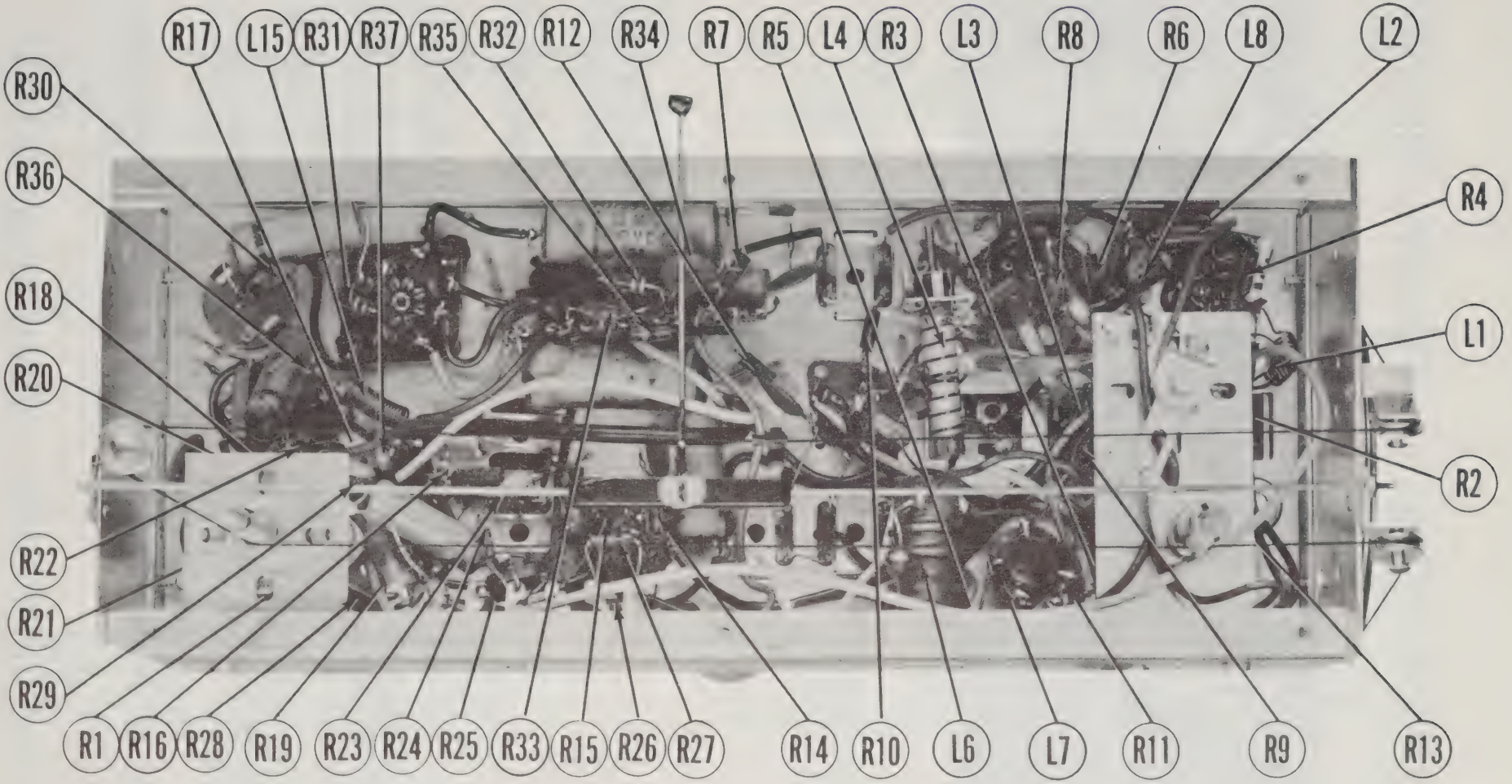


PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

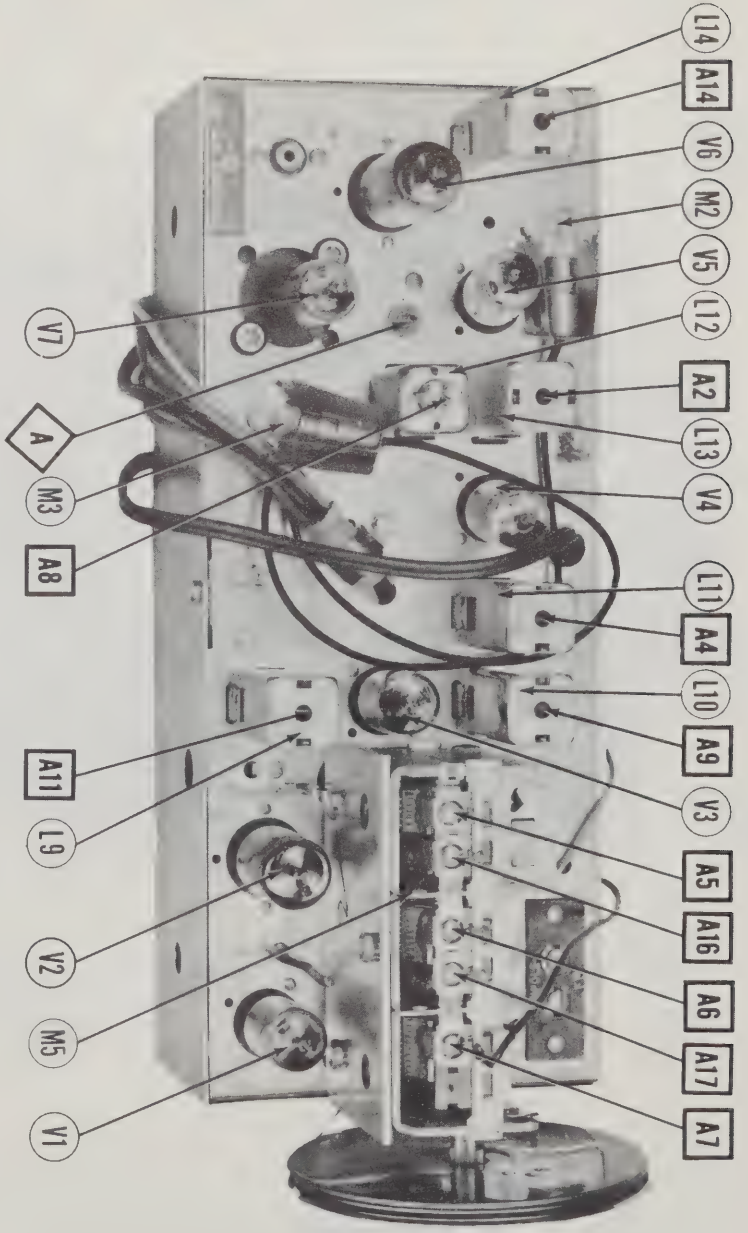
ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		General Electric PART No.	STANDARD REPLACEMENT		
V1	RF Amplifier	6BA6	6BA6	7BK	
V2	FM Mixer Oscillator	12AT7	12AT7	9A	
V3	1st FM IF Amp.-AM Mixer	6BA6	6BA6	7BK	
V4	2nd FM IF Amp.-1st AM IF Amp.	6BA6	6BA6	7BK	
V5	Limiter	6AU6	6AU6	7BK	
V6	FM Discriminator AM Detector-AVC-AF Amplifier	6T8	6T8	9E	
V7	Phono. Pre-Amp.	6AU6	6AU6	7BK	
V8	Phase Inverter	6J5	6J5	6Q	
V9	Power Output	6V6GT	6V6GT	7AC	
V10	Power Output	6V6GT	6V6GT	7AC	
V11	Rectifer	5Y3GT	5Y3GT	5T	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA						IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	General Electric PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1A	30	350	RCE-039	AF663J6B		UP44235C		TVL-4742	▪ Filter
B	30	350							■ Filter
C	15	300							▲ Filter
D	20	25							Output
C2	6	500	RCN-040	1468-000005	TCZ-6.8	5W5V5	GP1K-5	MS-55	RF Coupling
C3	5000		RCW-3014	BPD-005	DD-502	1D5D5	811-005	29C1	RF Amp. Decoupling
C4	82	500	UCG-1026		TCZ-82		GP1K-82		Fixed Trimmer
C5	5000		RCW-3014	BPD-005	DD-502	1D5D5	811-005	29C1	RF Amp. Decoupling
C6	100		RCW-3029	SI100	D6-101	5W5T1	GP1K-100	19C11	RF Amp. Cathode
C7	10	500	UCG-004	1468-00001	D6-100	5W5Q1	GP1K-10	MS-41	RF Coupling
C8	2.7		RCW-3039						RF Coupling
C9	.05	200	UCC-045	P288-05	DF-503	PTE4S5		2TM-S5	AVC Filter
C10	180	500	UCU-1034	1468-0002	D6-181	5W5T2	GP2K-180	1FM-32	AVC Filter
C11	.05	200	UCC-045	P288-05	DF-503	PTE4S5		2TM-S5	AVC Filter
C12	2	500	RCN-048	SII.5NP0	TCZ-1.5		NP0K-1.5		Osc. Coupling
C13	47	500	UCG-020	1468-00005	D6-470	5W5Q5	GP1K-47	1FM-45	Osc. Grid Cap.
C14	12		RCW-1058				N470K-12		Fixed Trimmer
C15	47	500	UCG-020	1468-00005	D6-470	5W5Q5	GP1K-47	1FM-45	Osc. Feedback
C16	5000		RCW-3014	BPD-005	DD-502	1D5D5	811-005	29C1	Conv. Fil. Bypass
C17	5000		RCW-3014	BPD-005	DD-502	1D5D5	811-005	29C1	FM Mixer Dec.
C18	1500		RCW-026	SII500	D6-152	1W5D15	GP2L-0015	29C8	FM Mixer Cathode
C19	.01	400	UCC-040	P488-01	D6-103	PTE4S1	821-01	4TM-S1	AM Mixer Cathode
C20	5000		RCW-3014	BPD-005	DD-502	1D5D5	811-005	29C1	1st IF Dec.
C21	5000		RCW-3014	BPD-005	DD-502	1D5D5	811-005	29C1	1st IF Cathode
C22	.005	600	UCC-039	P688-005	D6-502	PTE6D5	811-005	6TM-D5	2nd IF Decoupling
C23	5000		RCW-3014	BPD-005	DD-502	1D5D5	811-005	29C1	2nd IF Cathode
C24	5000		RCW-3014	BPD-005	DD-502	1D5D5	811-005	29C1	2nd IF Fil.
C25	47	500	UCG-020	1468-00005	D6-470	5W5Q5	GP1K-47	1FM-45	RF Bypass
C26	.01	400	UCC-040	P488-01	D6-103	PTE4S1	821-01	4TM-S1	Limiter Decoupling
C27	33	500	UCG-016	SI33	D6-330	5W5Q3	GP1K-33	19C24	IF Coupling
C28	470	500	UCU-044	1468-0005	D6-471	5W5T5	GP2K-470	1FM-35	RF Bypass
C29	220	500	UCU-536	1468-00025	D6-221	5W5T25	GP2K-220	19C13	RF Bypass
C30	.002	600	UCC-036	P688-002	D6-202	PTE6D2	GP2M-002	6TM-D2	Tone Comp.
C31	.008	200	UCC-039	1467-008		1D3D8		1FM-28	Tone Comp.
C32	5000		RCW-3014	BPD-005	DD-502	PTE6D5	811-005	29C1	Audio Coupling
C33	47	500	UCG-020	1468-00005	D6-470	5W5Q5	GP1K-47	1FM-45	AF Amp. Plate
C34	.005	400	UCC-039	P688-005	D6-502	PTE6D5	811-005	6TM-D5	Audio Coupling
C35	.05	200	UCC-045	P288-05	DF-503	PTE4S5		2TM-S5	Audio Coupling
C36	.1	600	UCC-048	P688-1	DF-104	PTE6P1		6TM-P1	Phono Pre-Amp. Dec.
C37	.1	600	UCC-048	P688-1	DF-104	PTE6P1		6TM-P1	Phono Pre-Amp. Screen
C38	.002	600	UCC-036	P688-002	D6-203	PTE6D2	GP2M-002	6TM-D2	Tone Comp.
C39	5000		RCW-3014	BPD-005	DD-502	1D5D5	811-005	29C1	RF Bypass
C40	.02	600	UCC-041	P688-02	DF-203	PTE6S2		6TM-S2	Audio Coupling
C41	.02	600	UCC-041	P688-02	DF-203	PTE6S2		6TM-S2	Audio Coupling
C42	.02	600	UCC-041	P688-02	DF-203	PTE6S2		6TM-S2	Audio Coupling
C43	.005	1000	UCC-059	P1088-005		PTE16D5		MB-D5	Tone Comp.
C44	.002	1000	UCC-056	P1088-002		PTE16D2		MB-D2	Output Plate
C45	.002	1000	UCC-056	P1088-002		PTE16D2		MB-D2	Output Plate

CHASSIS—TOP VIEW



PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER COLORADO

PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	General Elect. PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R1	2Meg	½	RRC-152				Volume Control & SW - Tapped ④ 1Meg-Tone SW.

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	General Electric PART No.	IRC PART No.	
R2	220Ω	½	URD-033		Parasitic Suppressor
R3	470KΩ	½	URD-113	BTS-470K	AVC Network
R4	100Ω	½	URD-025	BTS-100	RF Amp. Cathode
R5	2000Ω	2		BTB-2200	Decoupling - See Note
R6	1500Ω	½	URD-053	BTS-150	FM Mixer Cathode
R7	2200Ω	½	URD-057	BTS-2200	FM Mixer Decoupling
R8	22KΩ	½	URD-081		Osc. Grid
R9	68Ω	½	URD-021		Parasitic Suppressor
R10	100Ω	½	URD-025		Parasitic Suppressor
R11	1500Ω	½	URD-053	BTS-1500	AM Mixer Cathode
R12	2200 Ω	½	URD-057	BTS-2200	Decoupling
R13	100Ω	½	URD-025	BTS-100	1st FM IF Amp. Cathode
R14	100Ω	½	URD-025	BTS-100	IF Amp. Cathode
R15	2200Ω	½	URD-057	BTS-2200	IF Amp. Decoupling
R16	470K	½	URD-113	BTS-470K	Series Test Point
R17	100KΩ	½	URD-097	BTS-100K	Limiter Grid
R18	180Ω	½	URD-031	BTS-180	Limiter Cathode
R19	22KΩ	1	URE-081	BTA-22K	Limiter Decoupling
R20	120KΩ	½	URD-099	BTS-120K	Disc Diode Load
R21	120KΩ	½	URD-099	BTS-120K	Disc Diode Load
R22	100KΩ	½	URD-097	BTS-100K	De-emphasis
R23	220KΩ	½	URD-105	BTS-220K	Det Diode Load
R24	47KΩ	½	URD-089	BTS-47K	Diode Filter
R25	47KΩ	½	URD-089	BTS-47K	Diode Filter
R26	2.2Meg	½	URD-129	BTS-2.2Meg	AVC Network
R27	10KΩ	½		BTS-10K	Tone Compensation
R28	100KΩ	½	URD-097	BTS-100K	Tone Compensation
R29	33Ω	½	URD-013		Feedback Network
R30	6800Ω	½	URD-069	BTS-6800	Phono Input Shunt
R31	3.3Meg	½	URD-133	BTS-3.3Meg	Phono Pre-Amp. Grid
R32	3.3Meg	½	URD-133	BTS-3.3Meg	Phono Pre-Amp. Screen
R33	1Meg	½	URD-121	BTS-1Meg	Phono Pre-Amp. Plate
R34	220KΩ	½	URD-105	BTS-220K	Phono Pre-Amp. Decoupling
R35	100KΩ	½	URD-097	BTS-100K	Tone Compensation
R36	6.8Meg	½	URD-141	BTS-6.8Meg	AF Amp. Grid
R37	220KΩ	½	URD-105	BTS-220K	AF Amp. Plate
R38	470KΩ	½	URD-113	BTS-470K	Phase Inv Grid
R39	3300Ω	½	URD-061	BTS-3300	Phase Inv Cathode
R40	82KΩ	½	URD-095	BTS-82K	Bias Network
R41	82KΩ	½	URD-095	BTS-82K	Phase Inv Plate
R42	1000Ω	½	URD-041		Parasitic Suppressor
R43	1000Ω	½	URD-041		Parasitic Suppressor
R44	470KΩ	½	URD-113	BTS-470K	Output Grid
R45	470KΩ	½	URD-113	BTS-470K	Output Grid
R46	270Ω	2	URF-035	BW-2-270	Output Grid - Wire Wound
R47	33KΩ	1	URE-085	BTA-33K	Tone Compensation
R48	470Ω	½	URD-041	BTS-470	Feedback Network
R49A	1000Ω	8	RRW-056		Filter - Wire Wound
B	650Ω	10			Filter - Wire wound

Note some models use 2200Ω Resistor in this application

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	General Electric PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC ③ .725 A	520VCT .105ADC	5VAC ③ 2A	6.3VAC ③ 7.25A	RTP306			PH-120 ②

②Add series resistor to reduce plate voltage and drill new mtg. holes.

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		General Elect. PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T2	9.2KΩ CT	3.6Ω	425Ω CT	.3Ω	RTO-094	A-3823 ①			① Drill one new mounting hole

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			INSTALLATION NOTES
	FIELD	V. C. IMP.	General Electric PART No.	VIKING PART No.	QUAM PART No.	
SP1	PM	3.6Ω	S1212-D	12J12	12A4A	
	CONE DIA.	V. C. DIA.				
SP2	11 3/4"	1"				

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA			NOTES
		PRI.	SEC.	General Electric PART No.	MEISSNER PART No.	IRC PART No.	
L1	RF Choke	0Ω		RLI-130			
L2	RF Choke	0Ω		RTI-124			
L3	FM RF Coil	0Ω		RLI-128			
L4	FM Osc. Coil	0Ω	0Ω	RLC-104			
L5	Loop Ant.	1.2Ω		RLL-039			
L6	AM RF Coil	75Ω	25Ω	RLI-129			
L7	AM Osc. Coil	1.8Ω	8Ω	RLC-106			Secondary Tapped At 3.6Ω
L8	RF Choke	1.8Ω		RTI-122		CLA	2.2 Micro-henries
L9	1st FM IF	.5Ω	.5Ω	RTL-112			
L10	2nd FM IF	.8Ω	.8Ω	RTL-113	16-3487		
L11	1st AM IF	18Ω	18Ω	RTL-079			
L12	3rd FM IF	1.8Ω		RTL-100			
L13	2nd AM IF	15Ω	15Ω	RTL-111			
L14	Disc. Trans.	1Ω	.9Ω	RTD-010			
L15	RF Choke	0Ω		RTI-124			

PHONO CARTRIDGE and NEEDLE

ITEM No.	REPLACEMENT DATA							REMARKS
	General Electric PART No.	ASTATIC PART No.		SHURE PART No.		ELECTRO-VOICE PART No.		
		CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	
M1	RPX-050							

DIAL LIGHTS

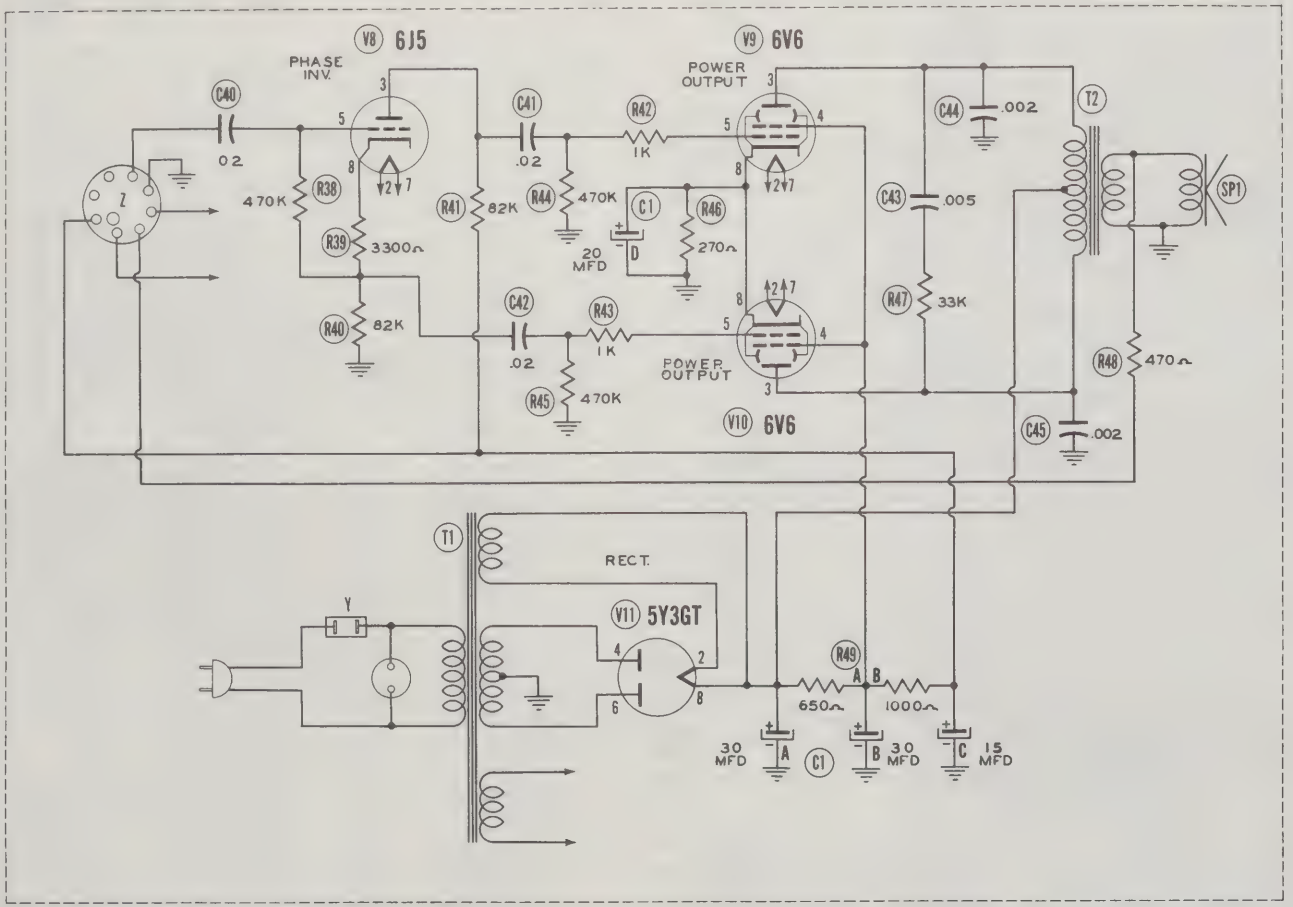
ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					General Electric PART No.		
M2	Bayonet	6-8	.15	Brown			Type #47
M3	Bayonet	6-8	.15	Brown			Type #47

MISCELLANEOUS

ITEM No.	PART NAME	General Electric PART No.	NOTES
M4	Switch	RSW-085	Function
M5	Tuning Gang	RCT-047	
	Dial Pointer	RDP-058	
	Cabinet	RAV-142	
	Knob	RDK-233	Tuning
	Knob	RDK-234	Band Switch
	Knob	RDK-235	Volume
	Knob	RDK-236	Tone

SET 130
FOLDER 6

GENERAL ELECTRIC
MODEL 755



A PHOTOFACT STANDARD NOTATION SCHEMATIC

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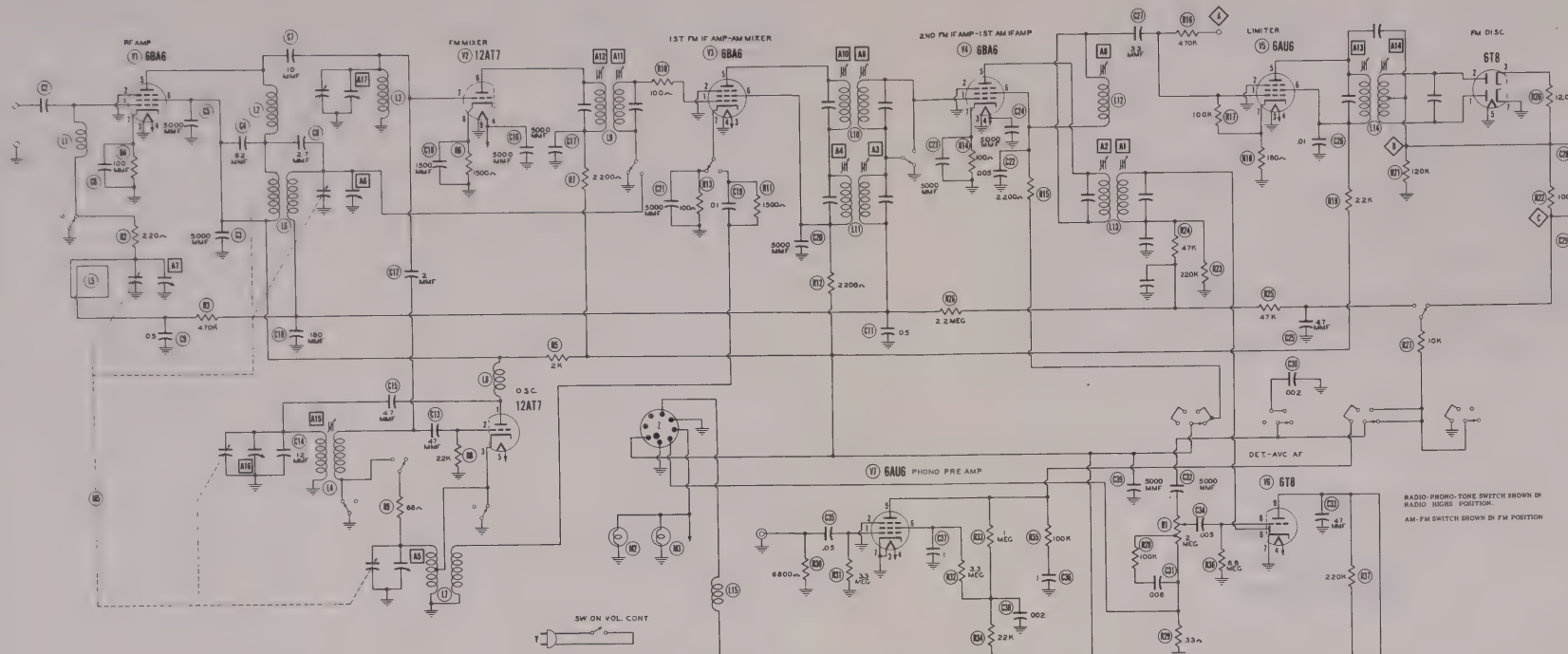

IF = 455 KC AM

IF = 10.7 MC FM

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BA6	† 0V + -.1VDC	0V	0V	6.3VAC	110SVDC +120VDC	110SVDC +125VDC	1.4VDC		
V 2	12AT7	110SVDC +120VDC	11-2 3VDC +9-11VDC	0V	6.3VAC	6.3VAC	114SVDC +135VDC	0V	2.7VDC	0V
V 3	6BA6	† 0V + -.1VDC	0V	6.3VAC	0V	110VDC +150VDC	110VDC +150VDC	11.6VDC +10VDC		
V 4	6BA6	† 0V + -.1VDC	0V	0V	6.3VAC	110VDC +120VDC	110VDC +125VDC	1.3VDC 1.7VDC		
V 5	6AU6	+ -.3VDC	0V	0V	6.3VAC	110VDC +60VDC	60VDC	+ .9VDC		
V 6	6T8	- 9VDC	- .9VDC	0V	6.3VAC	0V 18.6VDC	.9VDC 19VDC	0V	- .9VDC	10VDC
V 7	6AU6	- 8VDC	0V	0V	6.3VAC	+3.4VDC	+10VDC	0V		
V 8	6T5	0V	0V	180VDC +105VDC	0V 93.5VDC	+4VDC	0V	6.3VAC	155VDC +62VDC	
V 9	6V6GT	0V	0V	12245VDC +245VDC	5200VDC +210VDC	0V	0V	6.3VAC	15VDC	
V 10	6V6GT	0V	0V	+260VDC +245VDC	5200VDC +210VDC	0V	0V	6.3VAC	15VDC	
V 11	5Y3GT	0V	1245VDC +250VDC	0V	260VAC		260VAC	0V	1245VDC +250VDC	

§ TAKEN WITH VACUUM TUBE VOLTMETER

TONE-PHONO SWITCH IN POSITION 1
† TAKEN IN FM POSITION
+ TAKEN IN AM POSITION

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BA6	† 0Ω +.34Meg	0Ω	0Ω † 0Ω +3.6Ω	Ω	13.6KΩ	13.6KΩ	100Ω		
V 2	12AT7	13.6KΩ 100Ω	22KΩ	Ω	Ω	13.8KΩ	13.8KΩ	0Ω 110Ω	1.5KΩ	0Ω
V 3	6BA6	† 0Ω +2.34Meg † 8Ω	0Ω	Ω	0Ω	13.8KΩ	13.8KΩ	+1.5KΩ		
V 4	6BA6	+2.34Meg	0Ω	0Ω	Ω	13.8KΩ	13.8KΩ	100Ω		
V 5	6AU6	100KΩ	0Ω	0Ω	Ω	123KΩ	123KΩ	180Ω		
V 6	6T8	120KΩ	120KΩ	240KΩ	Ω	0Ω	220KΩ	0Ω	6.8Meg	1220KΩ
V 7	6AU6	2.3Meg	0Ω	0Ω	Ω	11.2Meg	13.5Meg	0Ω		
V 8	6T5	Inf.	0Ω	183KΩ	Inf.	550KΩ	Inf.	Ω	85KΩ	
V 9	5V4GT	Inf.	0Ω	120Ω	1650Ω	470KΩ	470KΩ	Ω	270Ω	
V 10	5V4GT	Inf.	0Ω	120Ω	1650Ω	470KΩ	470KΩ	Ω	270Ω	
V 11	5Y3GT	Inf.	120KΩ	Inf.	50Ω	Inf.	50Ω	Inf.	120KΩ	

‡ MEASURED FROM PIN 8 OF V11

THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

1. **DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.**
2. **Socket connections are shown as bottom views.**
3. **Measured values are from socket pin to common negative.**
4. **Line voltage maintained at 117 volts for voltage readings.**
5. **Nominal tolerance on component values makes possible a variation of + 10% in voltage and resistance readings.**
6. **Volume control at maximum, no signal applied for voltage measurements.**

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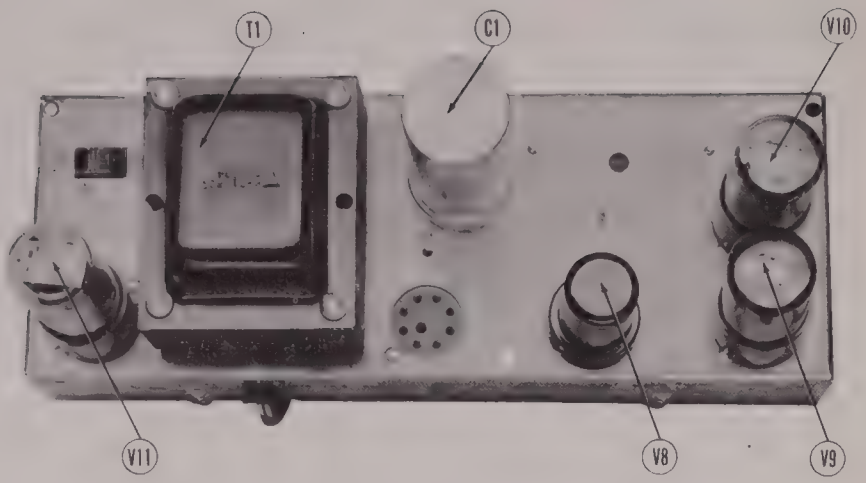
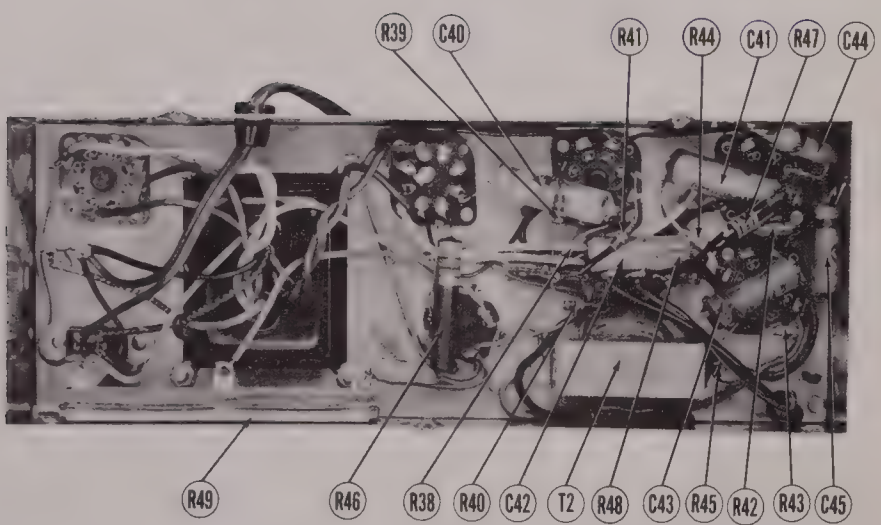


PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO



ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

All interconnecting cables between the tuner and power and audio chassis must be in place to operate the radio.
To set pointer, turn tuning cap fully closed and set pointer to last reference mark at low frequency end of dial.

AM ALIGNMENT

Loop should be maintained in same relative position to chassis as when receiver is in cabinet.
Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1MFD	High side to stator on center section of tuning gang. Low side to chassis.	455KC (400∿ Mod)	AM (CW)	Tuning gang fully open.	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.		Loop	1620KC	"	"	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.		Loop	1500KC	"	Tune for max. output.	"	A6, A7	Rock tuning gang while adjusting A6 & A7 for max. output.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
4.	.01MFD	High side to pin 1 (Grid) of 6BA6 (V3) Low side to chassis	10.7MC (unmod.)	FM (CCW)	Tuning gang fully open.	DC probe to point Ⓐ. Common to chassis.	A8, A9 A10	Adjust for maximum deflection.
5.	"	High side to pin 7 (Grid) of 12AT7 (V2) Low side to chassis	"	"	"	"	A11, A12	"
6.	"	"	"	"	"	DC probe to point Ⓑ. Common to chassis.	A13	"
7.	"	"	"	"	"	DC probe to point Ⓒ. Common to chassis.	A14	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60∿ modulation and 450KC sweep. Use 120∿ sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
4.	.01MFD	High side to pin 1 (Grid) of 6BA6 (V3) Low side to chassis	10.7MC (450KC swp)	FM (CCW)	Point of non-interference	Vert. Amp. to point Ⓐ. Low side to chassis.	A8, A9 A10	Adjust for maximum amplitude and symmetry as per fig. 1.
5.	"	High side to pin 7 (Grid) of 12AT7 (V2) Low side to chassis	"	"	"	"	A11, A12	"
6.	"	"	"	"	"	Vert. Amp. thru 10KΩ to point Ⓑ. Low side to chassis	A13	"
7.	"	"	"	"	"	Vert. Amp. to point Ⓒ. Low side to chassis.	A14	Adjust A14 so 10.7MC occurs at center of crossover lines as per fig. 2. SLIGHTLY retouch A13 for maximum amplitude & straightness of crossover lines.

FM RF ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
8.	300Ω carbon resistor	High side thru 300Ω to ungrounded FM ant. terminal. Low side to chassis.	88MC (unmod.)	FM	88MC	DC probe to point Ⓐ. Common to chassis.	A15	Turn A16 & A17 to maximum capacity. Adjust A15 for max. deflection.
9.	"	"	108MC	"	108MC	"	A16	Adjust to first peak for maximum deflection.
10.	"	"	"	"	"	"	A17	Rock tuning gang while adjusting for maximum deflection.

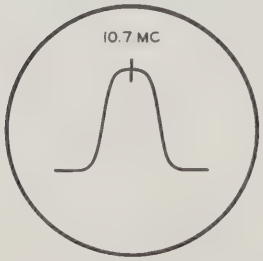


FIG. 1

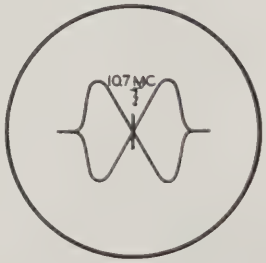


FIG. 2

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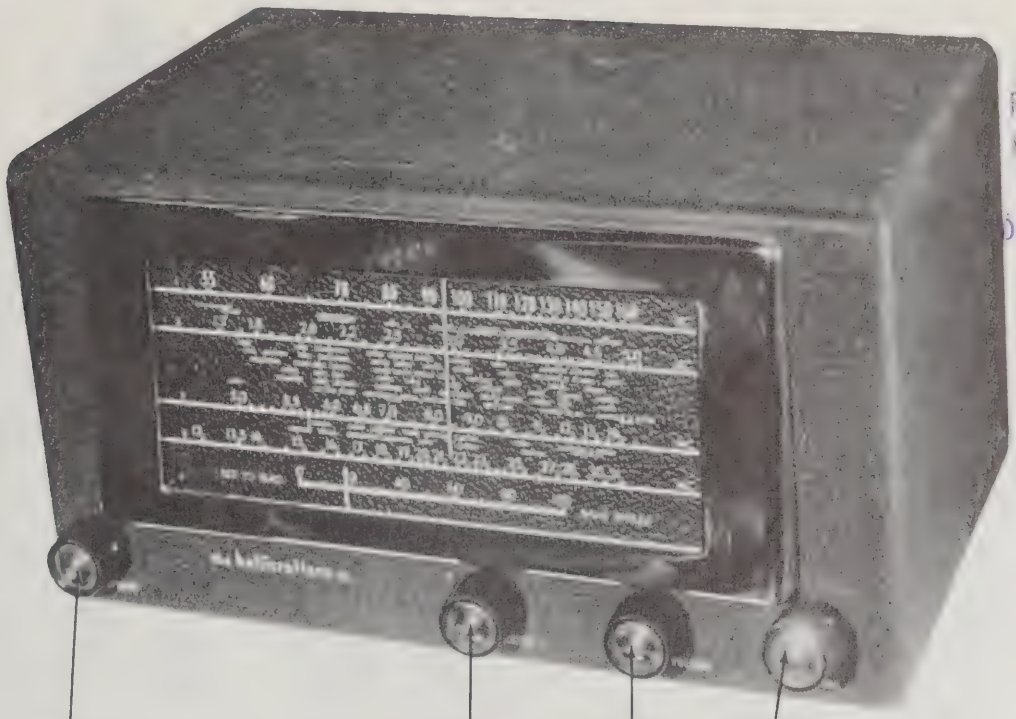

HALLICRAFTERS
MODEL 5R10

TRADE NAME	Hallicrafters, Model 5R10
MANUFACTURER	The Hallicrafters Co., 5th & Kostner Avenues, Chicago 24, Illinois
TYPE SET	AC-DC Operated 4 Band Superheterodyne Receiver
TUBES (FIVE)	Types 12SA7 Converter, 12SK7 IF Amp., 12SQ7GT Det.-AVC-AF 50L6GT Power Output, 35Z5GT Rectifier
POWER SUPPLY	105-125 Volts AC-DC RATING .25 Amp. @ 117 Volts AC
TUNING RANGE-	Band #1-540-1650KC, Band #2-1.65-5.1Mc Band #3-5-14.5MC, Band #4 13-31MC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer, turn tuning cap fully closed and set pointer to last reference mark at low frequency end of dial.
Use isolation transformer if available. If not, connect a .1MFD capacitor in series with low side of signal generator and chassis Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.
The RMA dummy antenna consists of a 200MMF capacitor in series with a 20 micro-henry RF choke which is shunted by a 400MMF capacitor in series with a 400 ohm carbon resistor.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.01Mfd	High side to stator on rear section of tuning gang. Low side to chassis.	455KC (400~ Mod)	1	1000KC	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2.	RMA	High side thru dummy to ant. terminal "A1". (connect link between A2 & G). Low side to chassis.	30MC	4	30MC	"	A5, A6	"
3.	"	"	14MC	3	14MC	"	A7, A8	"
4.	"	"	5MC	2	5MC	"	A9, A10	"
5.	"	"	1500KC	1	1500KC	"	A11, A12	"
6.	"	"	600KC	1	600KC	"	A13	Adjust for maximum output. Repeat steps 5 & 6 until no further improvement can be made.

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PARTS LIST AND DESCRIPTIONS

HALLICRAFTERS
MODEL 5R10

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: HALLICRAFTER PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	INSTALLATION NOTES
V1	Converter	90X12SA7	12SA7	8R	
V2	IF Amplifier	90X12SK	12SK7	8N	
V3	Det.-AVC-AF	90X12SQ7GT	12SQ7GT	8Q	
V4	Power Output	90X50L6GT	50L6GT	7AC	
V5	Rectifier	90X35Z5GT	36Z5GT	6AD	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: Hallicrafter PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1A	60	150	45B091	PRS1010D4A		EZ55515C		TVA-3451	Filter
B	40	150		PRS150/50				TVA-1205	Filter
C	40	150							Filter
D	20	25							Output Cathode
C2	.01	600	46AZ103J	P688-01	D6-103	PTE6S1	821-01	6TM-S1	Ant. Isolation
C3	.02	400	4CAW203J	P488-02	DF-203	PTE4S2		4TM-S2	AVC Filter
C4	2700	500	47X30B272J	SI2700	D6-272	1W5D3	GP2M-0027	1FM-23	Conv. Grid Filter
C5	220	500	47X20B221K	1468-0002	D6-221	5W5T2	GP2K-220	1FM-32	Osc. Grid Cap
C6	3000	500	47X30B302J	1464-003		1DR5D4		MS-23	Fixed Padder
C7	2200	500	47X30B222J						Fixed Padder
C8	.05	200	46AU503J	P288-05	DF-503	PTE4S5		2TM-S5	RF Bypass
C9	.25	200	46AT254J	P488-25		GT2P25		2TM-P25	RF Bypass
C10	.05	200	46AU503J	P288-05	DF-503	PTE4S5		2TM-S5	IF Cathode
C11	100	500	47X20B101K	1468-001	D6-101	5W5T1	GP1K-100	1FM-31	Diode RF Filter
C12	.01	600	46AZ103J	P688-01	D6-103	PTE6S1	821-01	6TM-S1	Audio Coupling
C13A	220		46A151	SI220	D6-221	5W5T25	GP2K-220		Diode RF Filter
B	2000			BPD-002	DD-202	PTE6D2	GP2M-002	34C3	Audio Coupling
C	220			SI220	D6-221	5W5T25	GP2K-220		AF Amp. Plate
D	5000			BPD-005	DD-502	PTE6D5	811-005		Audio Coupling
C14	.02	600	46AY203J	P688-02	DF-203	PTE6S2		6TM-S2	Output Plate
C15	470	500	47X20B471M	1468-0005	D6-471	5W5T5	GP2K-470	1FM-35	RF Bypass
C16	.02	600	46AY203J	P688-02	DF-203	PTE6S2		6TM-S2	Line Filter
C17	.1	600	46AZ104J	P688-1	DF-104	PTE6P1		72P52	Line Isolation

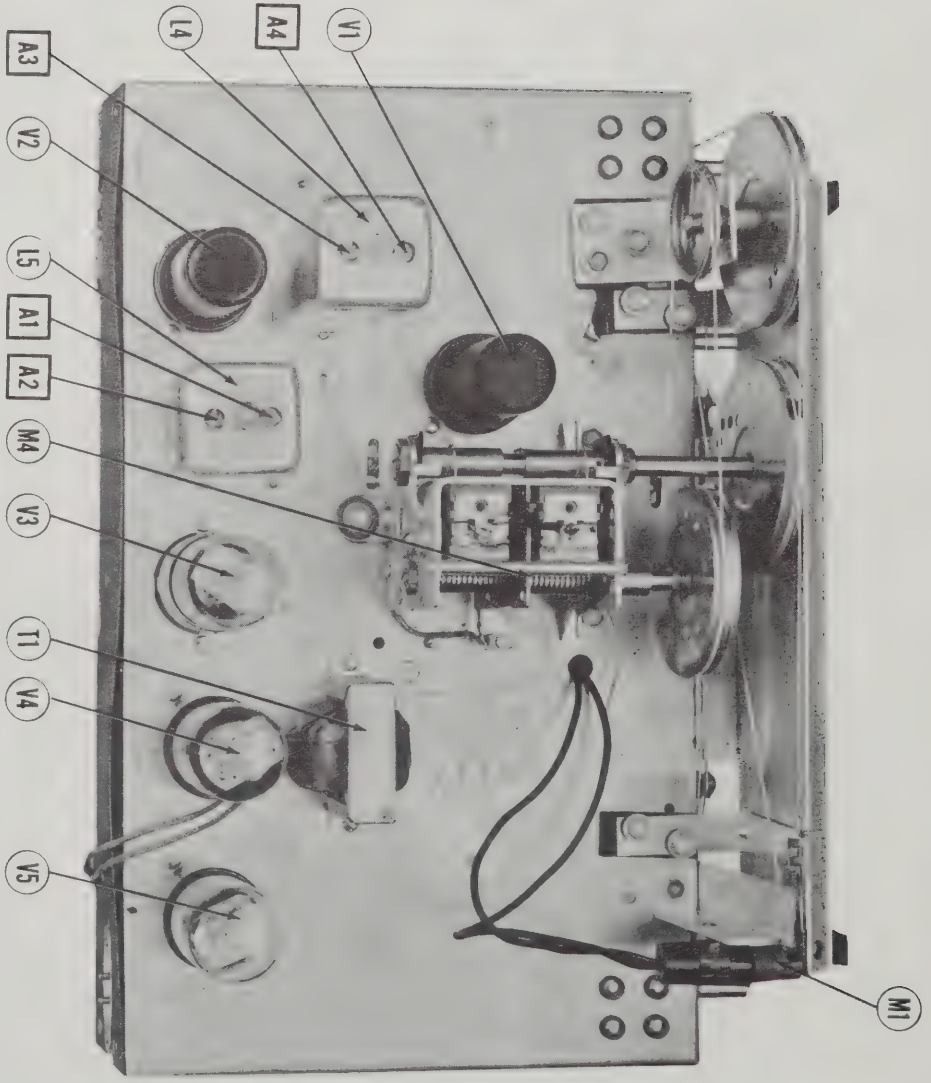
CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: Hallicrafters PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	INSTALLATION NOTES
R1A	2Meg	½	25B896	Q13-139	AM-66-Z	B-76-S	Volume Control
B	Shaft		Not Req	Not Req	RS-2	Not Req	Attach to R1A per instructions
C	Switch		Not Req	76-1	SW-A	Not Req	Attach to R1A per instructions

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: HALLICRAFTER PART No.	IRC PART No.	IDENTIFICATION CODES
R2	10KΩ	½	23X20X103M		Antenna Coil Shunt
R3	470KΩ	½	23X20X474M		Conv. Grid
R4	47Ω	½	23X20X470M		Parasitic Suppressor
R5	22KΩ	½	23X20X223M		Osc. Grid
R6	22Ω	½	23X20X220M		Parasitic Suppressor
R7	2.2Meg	½	23X20X225M	BTS-2.2Meg	AVC Network
R8	390Ω	½	23X20X391K	BTS-390	IF Amp Cathode
R9	47KΩ	½	23X20X473M	BTS-47K	Diode Filter
R10	470KΩ	½	23X20X474M	BTS-470K	AVC Network
R11	10Meg	½	23X20X106M	BTS-10Meg	AF Amp. Grid
R12	220KΩ	½	23X20X224M	BTS-220K	AF Amp. Plate
R13	470KΩ	½	23X20X474M	BTS-470K	Output Grid
R14	150Ω	½	23X20X151K	BTS-150	Output Cathode
R15	15Ω	½	23X20X150M	BW-½-15	Output Transformer Shunt
R16	1000Ω	½	23X20X102M	BTS-1000	Filter
R17	220Ω	2	23X40X221M	BW-2-220	Filter
R18	22Ω	½	23X20X220M		Surge Limiter
R19	330Ω	½	23X20X331M	BTS-330	Pilot Light Shunt

CHASSIS—TOP VIEW



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PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		Hallicrafters	STANCOR	MERIT	CHICAGO	
	PRI.	SEC.	PRI.	SEC.	PART No.	PART No.	PART No.	PART No.	
T1	1.7KΩ	3.2Ω	147Ω	.8Ω	55A127	A-3876	A-2928	RO-2	

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			INSTALLATION NOTES
			Hallicrafters PART No.	JENSEN PART No.	QUAM PART No.	
SP1	FIELD	V. C. IMP.	85C030	ST105 Model P5-X	5A1	
	PM	3.2Ω				
	CONE DIA.	V. C. DIA.				
SP2	4½"	9/16"				

R F COILS

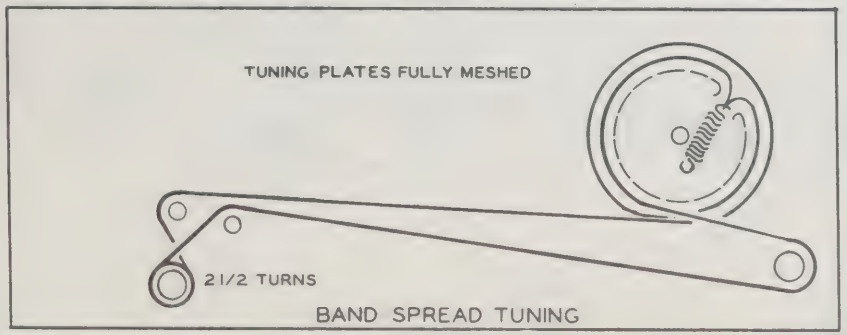
ITEM No.	USE	DC RES.		REPLACEMENT DATA		
		PRI.	SEC.	Hallicrafters PART No.	MEISSNER PART No.	
L1A	Ant. Coil	26Ω	4.8Ω	51C821		Bank 1 540-1650KC
B	Ant. Coil	.9Ω	1.4Ω			Bnad 2 1.65-5.1MC
C	Ant. Coil		.1Ω			Band 3 5-14.5MC
L2	Ant. Coil	.4Ω	.1Ω	51B1015		Band 4 13-31MC
L3A	Osc. Coil		2.8Ω	51C822		Band 1 540-1650KC
B	Osc. Coil		2.9Ω			Band 2 1.65-5.1MC
C	Osc. Coil		.1Ω			Band 3 5-14.5MC
D	Osc. Coil	.1Ω	.1Ω			Band 4 13-31MC
L4	1st IF	22Ω	22Ω	50B183		
L5	2nd IF	22Ω	22Ω	50B184		

DIAL LIGHTS

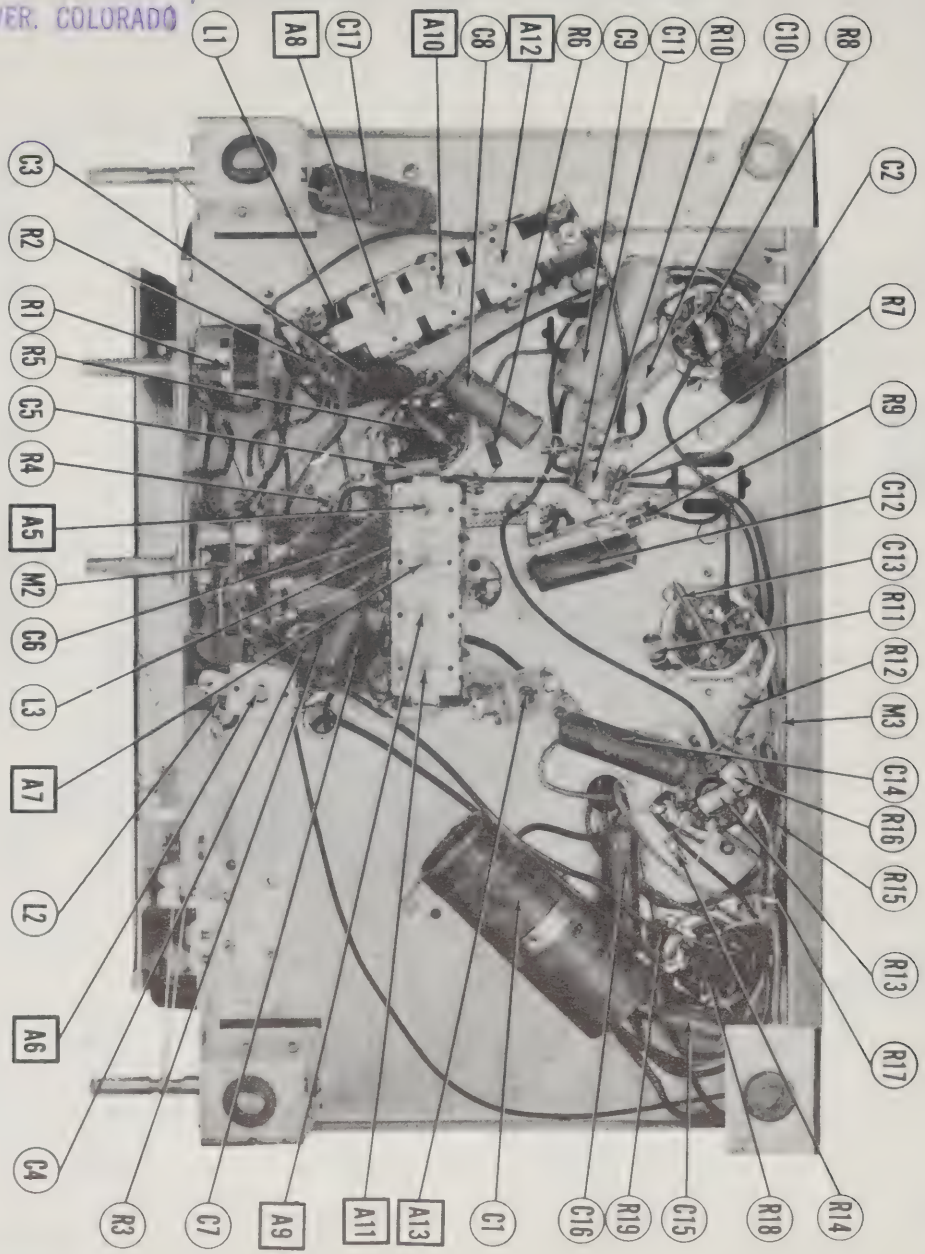
ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					HALLICRAFTER PART No.		
M1	Bayonet	6-8	.15	Brown	39A004		Type #47

MISCELLANEOUS

ITEM No.	PART NAME	HALLICRAFTERS PART No.	NOTES
M2	Switch	60C393	Band
M3	Switch	60A243	Speaker - Phone
M4	2 Gang Var. Cap.	48C246-B	(19-431MMF, 19-431MMF)
	Cabinet	66B634-B	
	Dial Scale	22B318-C	
	Pointer	82A179	Band Spread
	Pointer	82A180	Tuning
	Knob	15B322	Band Switch
	Knob	15B323	Band Spread, Off-Volume, Tuning



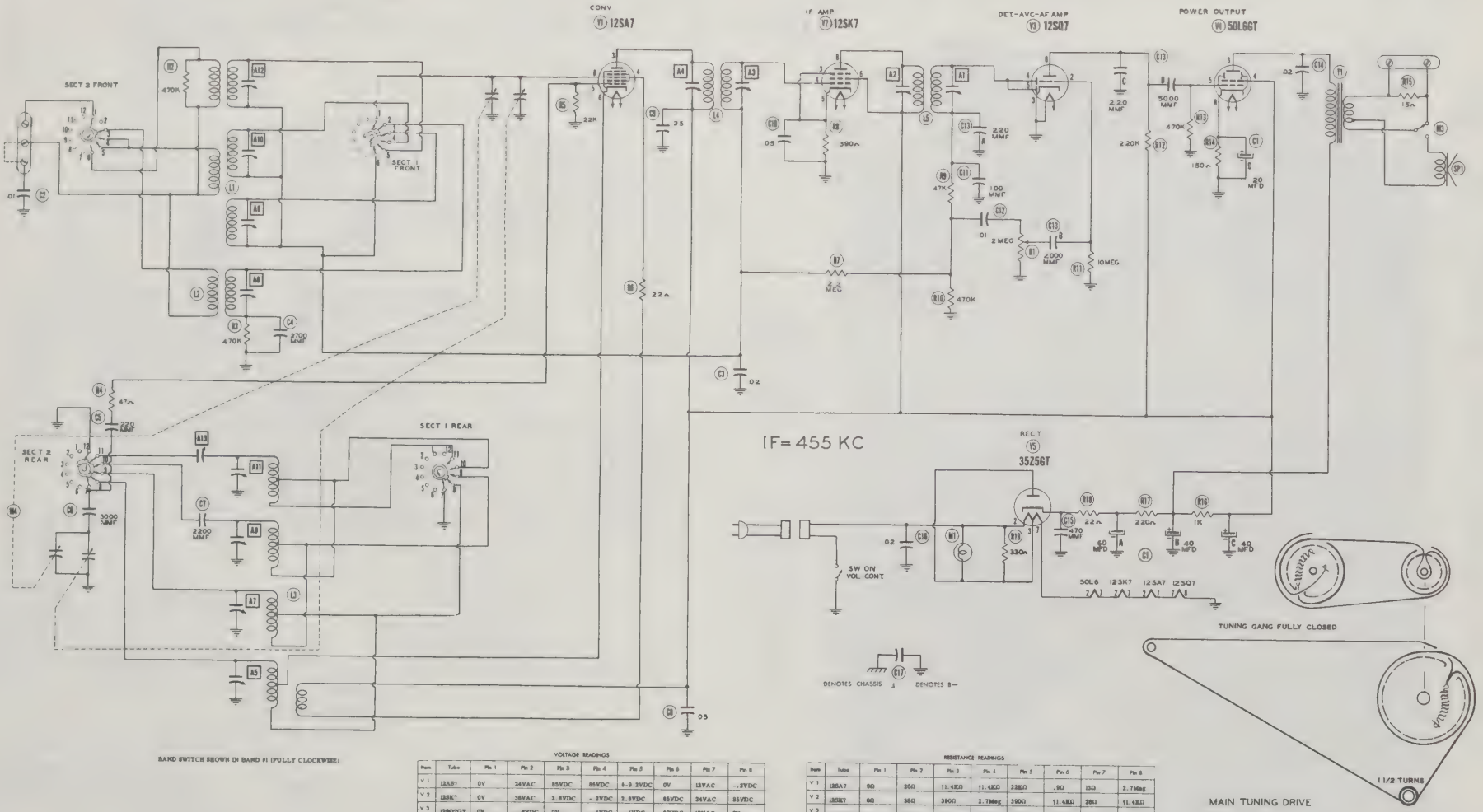
CHASSIS—BOTTOM VIEW



SET 130 FOLDER 7

HALLICRAFTERS MODEL SR10

HALLICRAFTERS MODEL SR10



BAND SWITCH SHOWN IN BAND #1 (FULLY CLOCKWISE)

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	12SA7	0V	34VAC	85VDC	85VDC	6-9.2VDC	0V	13VAC	-.2VDC
V 2	12SK7	0V	36VAC	3.8VDC	- .3VDC	3.8VDC	85VDC	34VAC	85VDC
V 3	12SQ7GT	0V	-.6VDC	0V	-.4VDC	-.4VDC	60VDC	12VAC	0V
V 4	50L6GT	0V	83VAC	86VDC	85VDC	0V	100VDC	36VAC	5.5VDC
V 5	35Z5GT	0V	117VAC	108VAC	112VDC	108VAC	0V	83VAC	115VDC

‡ TAKEN WITH VACUUM TUBE VOLTMETER

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	12SA7	0Ω	25Ω	11.4KΩ	11.4KΩ	22KΩ	.9Ω	13Ω	3.7Meg
V 2	12SK7	0Ω	38Ω	390Ω	2.7Meg	390Ω	11.4KΩ	38Ω	11.4KΩ
V 3	12SQ7GT	0Ω	10Meg	0Ω	520KΩ	520KΩ	†320KΩ	13Ω	0Ω
V 4	50L6GT	0Ω	90Ω	†390Ω	11.4KΩ	470Ω	†340Ω	38Ω	150Ω
V 5	35Z5GT	Inf.	120Ω	115Ω	132Ω	115Ω	Inf.	90Ω	35KΩ

† MEASURED FROM PIN 6 OF V5

Y & R TAKEN IN BAND 1

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

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DENVER, COLORADO

JACKSON
MODEL 150

JACKSON
MODEL 150

JACKSON MODEL 150

TRADE NAME	Jackson Model 150
MANUFACTURER	Jackson Ind., Inc., 58E. Cullerton St., Chicago, Ill.
TYPE SET	AC Operated Radio-Phonograph Combination Superheterodyne Receiver With Loop Antenna
TUBES (SEVEN)	Types 12BE6 Converter, 12BA6 IF Amp., 12AT6 Det.-AVC-AF, 12AT6 Phase Inv., (2) 50C5 Power Output, 35W4 Rectifier
POWER SUPPLY	110-120 Volts AC — RATING .37 Amp. @ 117 Volts AC
TUNING RANGE—BROADCAST	535-1620KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer turn tuning gang fully closed and set the left hand edge of the pointer carriage 2 inches to the right of the left hand end of the metal backplate.

Use isolation transformer if available. If not connect a .1MFD capacitor in series with low side of signal generator and B-.

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1MFD	High side to pin 7 (grid) of 12BE6 (V1). Low side to B-.	455KC (400 ∿ Mod.)	Tuning gang fully open	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output. If isolation transformer is not used, reduce dummy antenna to .001MFD to reduce hum modulation.
2.		Loop	1620KC	"	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.		Loop	1400KC	Tune for max. output	"	A6	"

FOR SERVICE INFORMATION ON RECORD CHANGER FOR MODEL 150 SEE CRESCENT MODEL 350 SERIES IN PHOTOFACT SET 80 FOLDER 3 OR RECORD CHANGER MANUAL CM-2.

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PARTS LIST AND DESCRIPTIONS

JACKSON MODEL 150

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: JACKSON PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	INSTALLATION NOTES
V1	Converter	12BE6	12BE6	7CH	
V2	IF Amplifier	12BA6	12BA6	7BK	
V3	Det.-AVC-AF Amp.	12AT6	12AT6	7BT	
V4	Phase Inv.	12AT6	12AT6	7BT	
V5	Power Output	50C5	50C5	7CV	
V6	Power Output	50C5	50C5	7CV	
V7	Rectifier	35W4	35W4	5BQ	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: JACKSON PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1A	40	150	8C-190	PRS150/40-40		EDL4415		TVA-2445	Filter Red
B	40	150							Filter Red
C2	5	500		1468-000005	TCZ-4.7	5W5V5	GP1K-5	MS-55	Ext. Ant. Coupling
C3	.1	200	C8P-101	P288-1	DF-104	PTE4P1		2TM-P1	AVC Filter
C4	.01	400	8G-180	P488-01	D6-103	PTE4S1	821-01	4TM-S1	Audio Coupling †
C5	.002	600	C8P-102	P688-002	D6-202	PTE6D2	GP2M-002	6TM-D2	Tone Comp.
C6A	250		† 65A-407	SI250	D6-251	5W5T25	GP2K-250	19C13	AF Amp. Plate
B	5000			BPD-005	DD-502	PTE6D5	811-005	29C1	Audio Coupling
C7	.005	600	C8P-102	P688-005	D6-502	PTE6D5	811-005	6TM-D5	Audio Coupling
C8A	250		• 65A-407	SI250	D6-251	5W5T25	GP2K-250	19C13	Phase Inv. Plate
B	5000			BPD-005	DD-502	PTE6D5	811-005	29C1	Audio Coupling
C9	.05	400	8C-536	P488-05	DF-503	PTE4S5		72P51	Line Isolation
C10	.1	400	8P-101	P488-1	DF-104	PTE4P1		4TM-P1	Line Filter
C11	15				TCZ-15		NPOK-15	19C5	Fixed Trimmer §

‡ Some models use .005MFD in this application.
† Items C6A, C6B, R7A and R7B are combined into one unit.
• Items C8A, C8B, R10A and R10B are combined into one unit.
§ Not used in all models.

CONTROLS

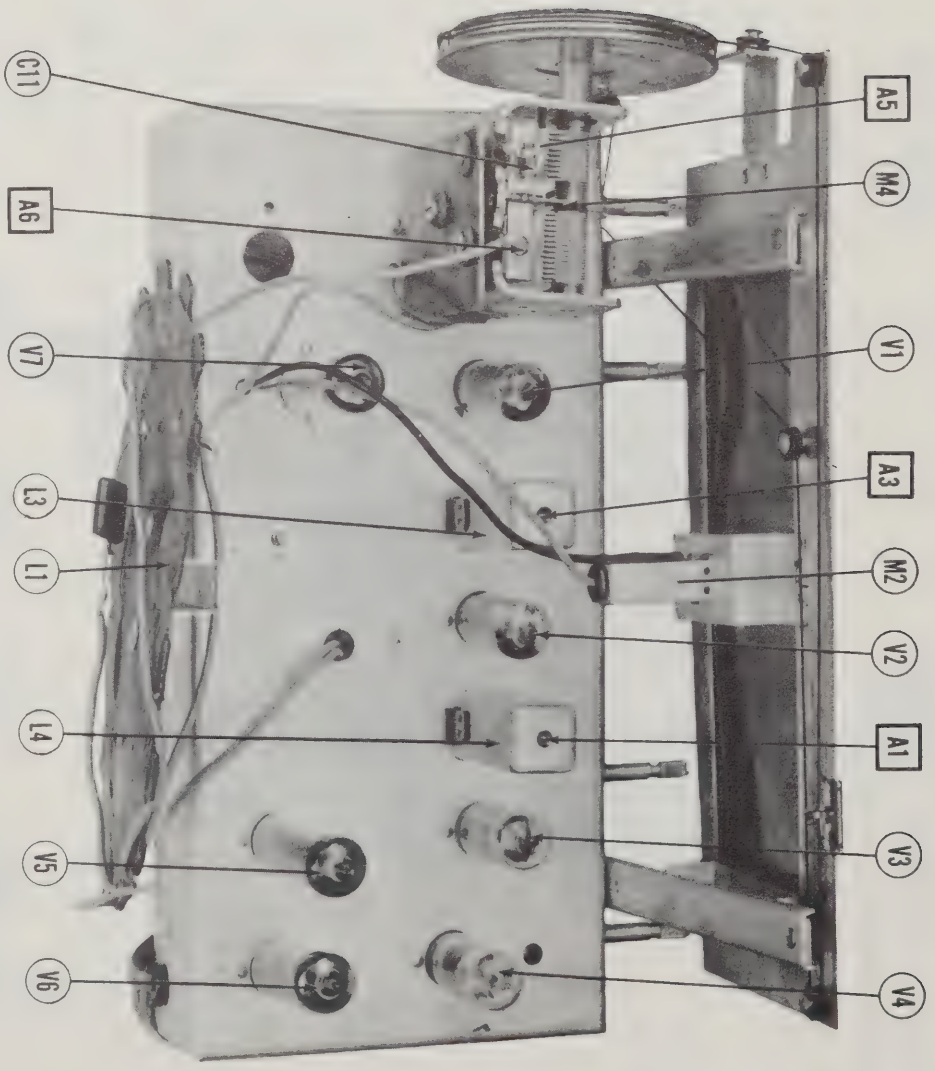
ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: JACKSON PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	INSTALLATION NOTES
R1A	1Meg	½	10A-408	Q13-137	AM-63-Z	BSK-60-S	Volume Control
B	Shaft		Not req.	Not req.	KSS-3	Not req.	Attach to R1A Per Instructions
C	Switch		Not req.	76-1	SW-A	Not req.	Attach to R1A Per Instructions
R2A	500KΩ	½	10B-409	Q13-133	AM-60-Z	BSK-60	Tone Control
B	Shaft		Not req.	Not req.	KSS-3	Not req.	Attach to R2A Per Instructions

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: JACKSON PART No.	IRC PART No.	IDENTIFICATION CODES
R3	22KΩ	½			Osc. Grid
R4	1Meg	½		BTS-1Meg	AGC Network
R5	47KΩ	½		BTS-47K	Diode Filter
R6	8.2Meg	½		BTS-8.2Meg	AF Amp. Grid - See Note 1
R7A	500KΩ	½	†		AF Amp. Plate
B	500KΩ	½			Output Grid
R8	220KΩ	½		BTS-220K	Voltage Divider
R9	8.2Meg	½		BTS-8.2Meg	Phase Inv. Grid - See Note 1
R10A	500KΩ	½	•		Phase Inv. Plate
B	500KΩ	½			Output Grid
R11	150Ω	1		BTA-150	Output Cathode - See Note 3
R12	2200Ω	1		BTA-2200	Filter
R13	220KΩ	½		BTS-220K	Isolation
R14	10Ω	½			Rectifier Ballast - See Note 2
R15	400Ω	10		1 3/4 A-400	Filament Dropping - Wire Wound

† Items C6A, C6B, R7A and R7B are combined into one unit.
• Items C8A, C8B, R10A and R10B are combined into one unit.
Note 1. Some models use 6.8Meg resistor in this application.
Note 2. Some models use 15Ω resistor in this application.
Note 3. Some models use parallel resistors in this application to obtain desired value.

CHASSIS—TOP VIEW



PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST
DENVER, COLORADO

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		JACKSON PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T1	4KΩ CT	4Ω	240Ω CT	.5Ω	12B401	A-3856	A-2900 ①	R0-301 ①	① Drill new mounting hole.

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			INSTALLATION NOTES
	FIELD	V.C. IMP.	JACKSON PART No.	VIKING PART No.	QUAM PART No.	
SP1	PM	4Ω		10J12	10A4A	
	CONE DIA.	V.C. DIA.				
SP2	9 1/4"	1"				

R F COILS

ITEM No.	USE	DC RES.		REPLACEMENT DATA		
		PRI.	SEC.	JACKSON PART No.	MEISSNER PART No.	
L1	Loop Antenna	1.9Ω		13E-397		
L2	Osc. Coil	5.5Ω		13D-400		Tap at .7Ω
L3	1st IF	14Ω	14Ω	13A-398		
L4	2nd IF	12Ω	12Ω	13A-399		

PHONO CARTRIDGE and NEEDLE

ITEM No.	REPLACEMENT DATA							REMARKS
	JACKSON PART No.	ASTATIC PART No.		SHURE PART No.		ELECTRO-VOICE PART No.		
		CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	
M1		L70A		W58A		32	0-3 or S-3	

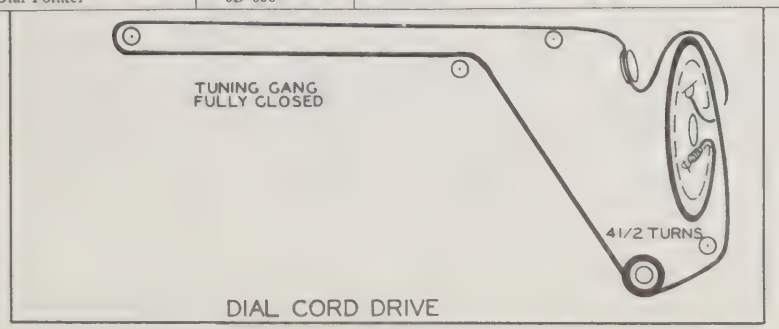
ASTATIC, SHURE AND ELECTRO-VOICE NEEDLE LISTINGS SHOWN ABOVE ARE SPECIFIED FOR THE RESPECTIVE REPLACEMENT CARTRIDGES LISTED

DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					JACKSON PART No.		
M2	Bayonet	6-8	.15		Brown		Type #47

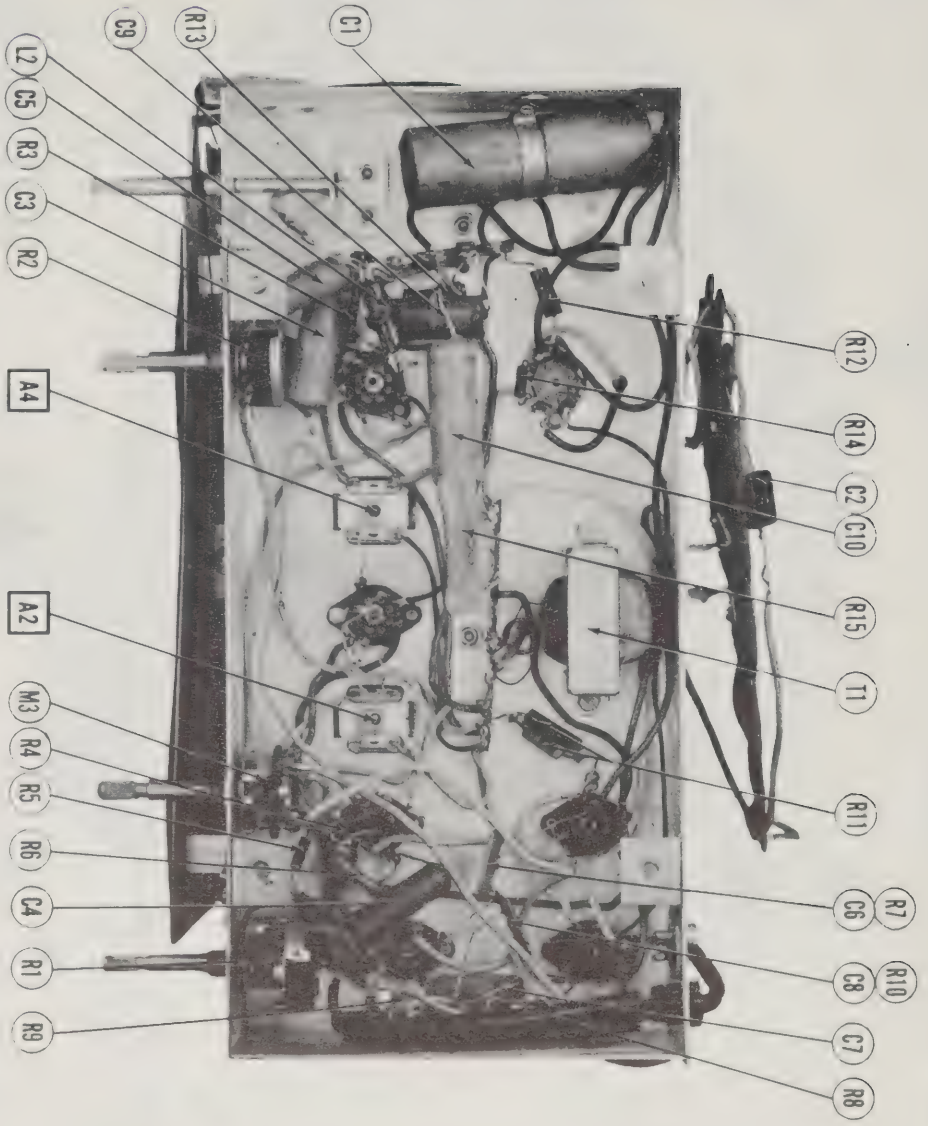
MISCELLANEOUS

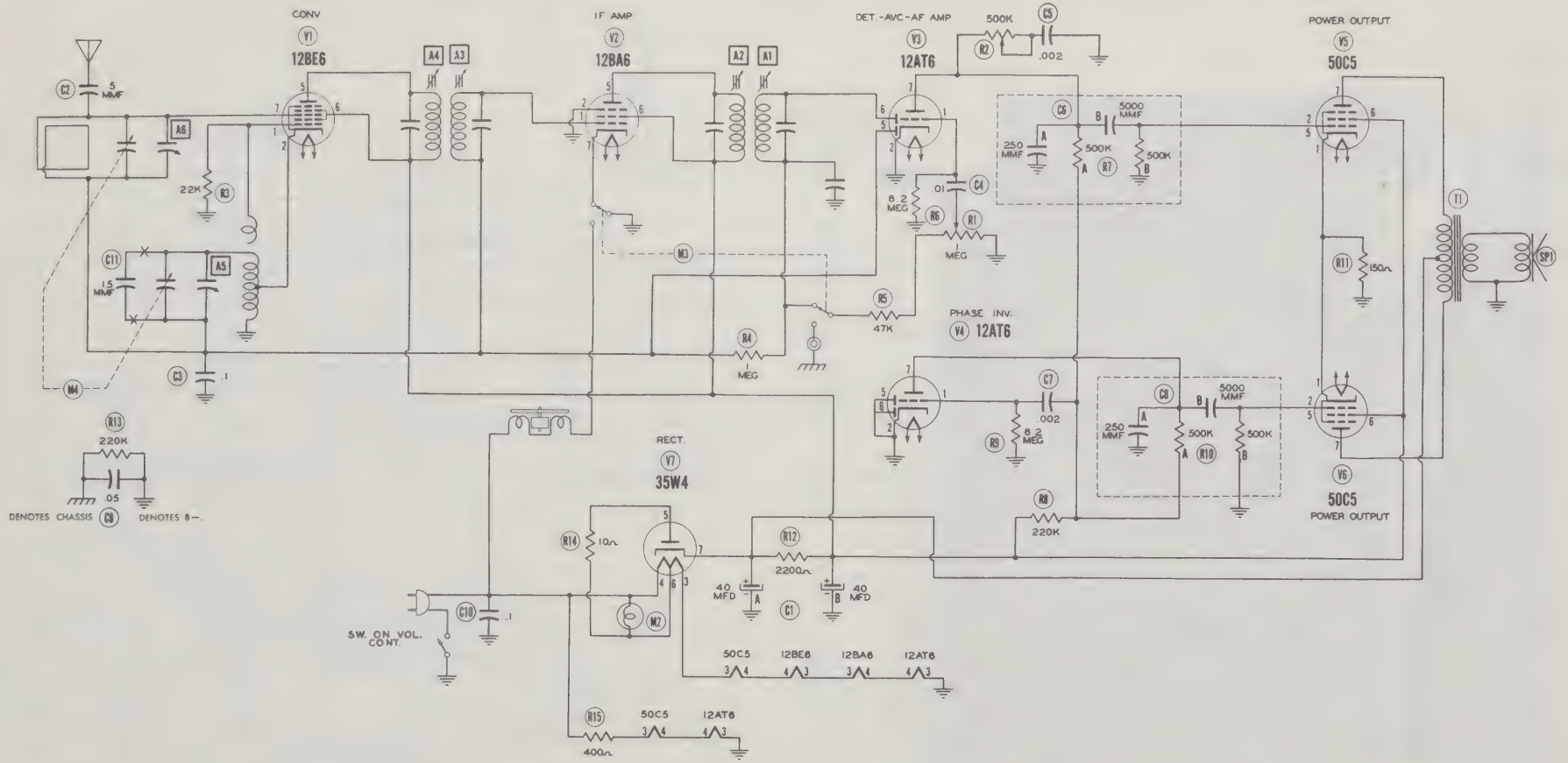
ITEM No.	PART NAME	JACKSON PART No.	NOTES
M3	Switch	20B-410	Radio-Phono
M4	2 Gang Var. Cap	8A-411	(33-477MMF, 16-196MMF)
	Dial Pointer	6B-535	



DIAL CORD DRIVE

CHASSIS—BOTTOM VIEW





VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	12BE6	8-6.5VDC	0V.	23VAC	35VAC	70VDC	70VDC	-.5VDC
V 2	12BA6	-.5VDC	0V.	24VAC	12VAC	70VDC	70VDC	0V.
V 3	12AT6	-.4VDC	0V.	0V.	12VAC	-.5VDC	-.5VDC	28VDC
V 4	12AT6	.6VDC	0V.	0V.	12VAC	0V.	0V.	22VDC
V 5	50C5	6.4VDC	0V.	60VAC	12VAC	0V.	70VDC	110VDC
V 6	50C5	6.4VDC	0V.	85VAC	35VAC	0V.	70VDC	110VDC
V 7	35W4	0V.	0V.	85VAC	117VAC	105VAC	110VAC	115VDC

‡ TAKEN WITH VACUUM TUBE VOLTMETER.

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	12BE6	22KΩ	.7Ω	25Ω	37Ω	†2.2KΩ	†2.2KΩ	2 Meg.
V 2	12BA6	2 Meg.	0Ω	25Ω	13Ω	†2.2KΩ	†2.2KΩ	0Ω
V 3	12AT6	16 Meg.	0Ω	0Ω	13Ω	2 Meg.	1 Meg.	†720KΩ
V 4	12AT6	8.2 Meg.	0Ω	0Ω	13Ω	0Ω	0Ω	†720KΩ
V 5	50C5	150Ω	500KΩ	65Ω	13Ω	500KΩ	†2.2KΩ	†120Ω
V 6	50C5	150Ω	500KΩ	80Ω	37Ω	500KΩ	†2.2KΩ	†120Ω
V 7	35W4	Inf.	Inf.	80Ω	100Ω	110Ω	95Ω	65KΩ

RADIO-PHONO SWITCH IN "RADIO" POSITION.

† MEASURED FROM PIN 7 OF V7.

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130-8

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

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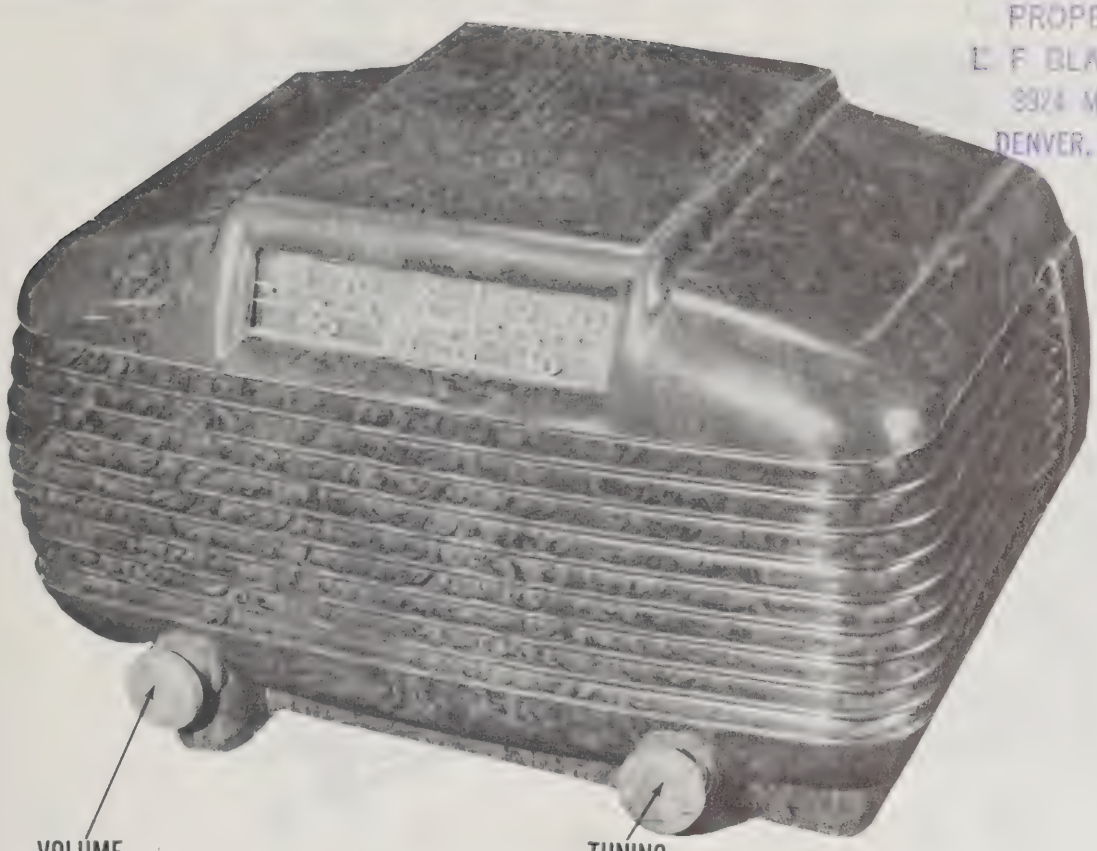
DENVER, COLORADO

MAJESTIC
MODELS 5LA5, 5LA6



MAJESTIC
MODELS 5LA5, 5LA6

MAJESTIC MODEL 5LA5

TRADE NAME	Majestic, Models 5LA5, 5LA6
MANUFACTURER	Majestic Radio & Tel., Div. of Wilcox-Gay Corp., 70 Washington St., Brooklyn, New York
TYPE SET	AC-DC Operated Superheterodyne Receiver with Loop Antenna
TUBES (FIVE)	Types 12SA7 Converter, 12SK7 IF Amp., 12SQ7 Det.-AVC-AF, 50L6GT Power Output, 35Z5GT Rectifier
POWER SUPPLY	105-125 Volts AC-DC — RATING .26 Amp. @ 117 Volts AC
TUNING RANGE—BROADCAST	540-1650KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer, turn tuning cap fully closed and set pointer to last reference mark at low frequency end of dial.
Use isolation transformer if available. If not connect a .1MFD capacitor in series with low side of signal generator and B-.
Loop should be maintained in same relative position to chassis as when receiver is in cabinet.
Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1MFD	High side to stator on rear section of tuning gang. Low side to B-.	455KC (400~ Mod)	Tuning gang fully open.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output. If isolation transformer is not used, reduce dummy antenna to .001MFD to reduce hum modulation.
2.		Loop	1650KC	"	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver Adjust for maximum output.
3.		Loop	1500KC	Tune for max. output.	"	A6	"

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PARTS LIST AND DESCRIPTIONS

MAJESTIC
MODEL 5LA5

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		MAJESTIC PART No.	STANDARD REPLACEMENT		
V1	Converter	12SA7	12SA7	8R	
V2	IF Amplifier	12SK7	12SK7	8N	
V3	Det.-AVC-AF	12SQ7	12SQ7	8Q	
V4	Power Output	50L6GT	50L6GT	7AC	
V5	Rectifier	35Z5GT	35Z5GT	6AD	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA						IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	MAJESTIC PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1A	40	150	5.415-4	PRS150/40-40-4		EDL4425		TVA-3451	Filter Blue
B	40	150							Filter Red
C	20	150							Filter Yellow
C2	.005	600		P688-005	D6-502	PTE6D5	811-005	6TM-D5	Ant. Isolation
C3	.02	400		P488-02	DF-203	PTE6S2		4TM-S2	AVC Filter
C4	.25	400		P488-25		GT4P25		72P53	Line Isolation
C5	47			SI47	D6-470	5W5Q5	GP1K-47	19C25	Osc. Grid Cap.
C6	100			SI100	D6-101	5W5T1	GP1K-100	19C11	Diode RF Filter
C7	.01	600		P688-01	D6-103	PTE6S1	821-01	6TM-S1	Audio Coupling
C8	220			SI220	D6-221	5W5T25	GP2K-220	19C13	AF Amp. Plate
C9	.01	400		P488-01	D6-103	PTE4S1	821-01	4TM-S1	Audio Coupling
C10	.02	400		P488-02	DF-203	PTE4S2		4TM-S2	Output Plate
C11	.05	400		P488-05	DF-503	PTE4S5		4TM-S5	Line Filter

CONTROLS

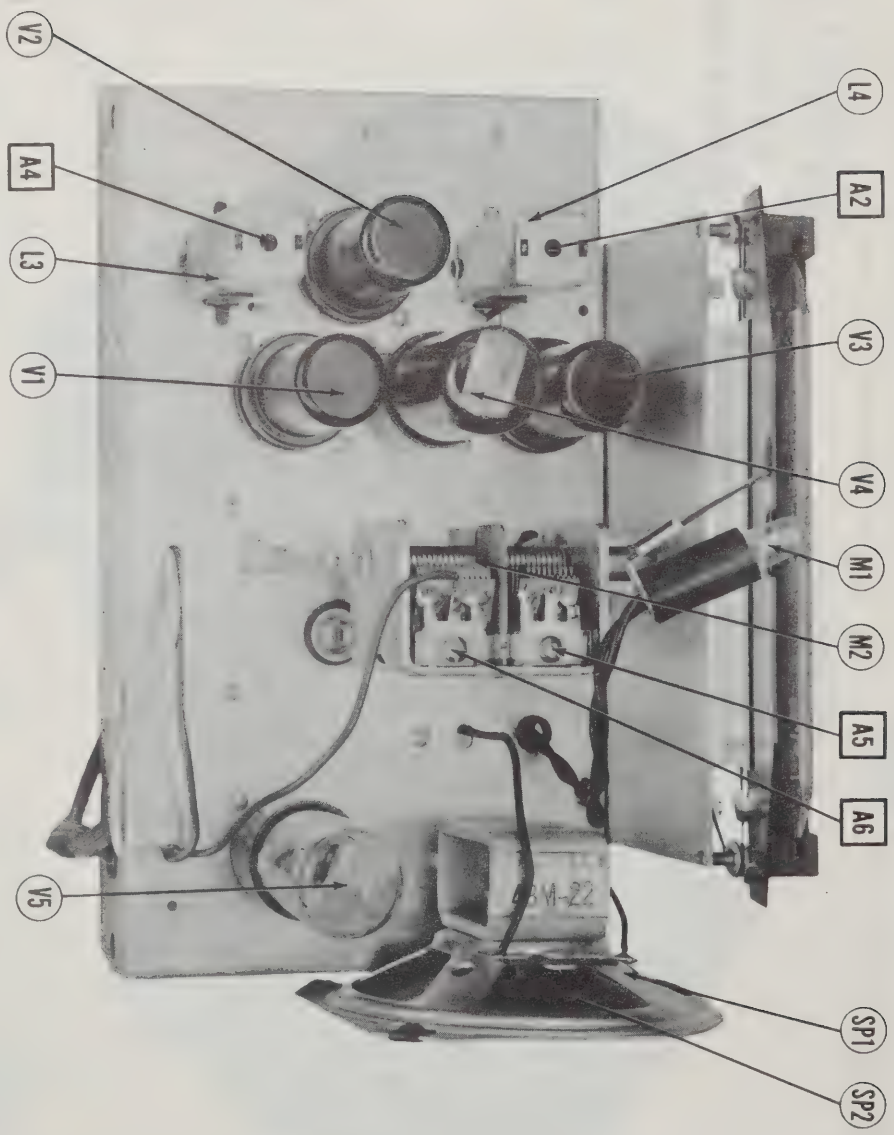
ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	MAJESTIC PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R1A	1Meg	½	C8.201-8	Q13-137	AG-63-Z	BSK-70-S	Volume Control
B	Shaft		Not Req	Not Req	KSS-3	Not Req	Attach to R1A per instructions
C	Switch		Not Req	76-1	SWB	Not Req	Attach to R1A per instructions

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	MAJESTIC PART No.	IRC PART No.	
R2	22KΩ	½			Osc. Grid
R3	270Ω	½		BTS-270	IF Amp. Cathode - See Note
R4	2.2Meg	½		BTS-2.2Meg	AVC Network
R5	47KΩ	½		BTS-47K	Diode Filter
R6	2.2Meg	½		BTS-2.2Meg	AF Amp. Grid
R7	220KΩ	½		BTS-220K	AF Amp. Plate
R8	470KΩ	½		BTS-470K	Output Gird
R9	150Ω	½		BTS-150Ω	Output Cathode
R10	1000Ω	1		BTA-1000	Filter
R11	100Ω	1		BTA-100	Filter
R12	220K	½		BTS-220K	Isolation

Note Not used in all models

CHASSIS—TOP VIEW



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3924 MEADE ST.
DENVER, COLORADO

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		MAJESTIC PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T1	2.25KΩ	3Ω	174Ω	.7Ω	9.249-1	A-3332 ②	A-2928	RO-2 ②	② Drill one new mounting hole

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			INSTALLATION NOTES
			MAJESTIC PART No.	JENSEN PART No.	QUAM PART No.	
SP1	FIELD	V. C. IMP.	30.329	ST113 ①	4A1 ①	① Use universal mounting brackets
	PM	3Ω		Model P4-X		
SP2	CONE DIA.	V. C. DIA.				
	4"	9/16"				

R F COILS

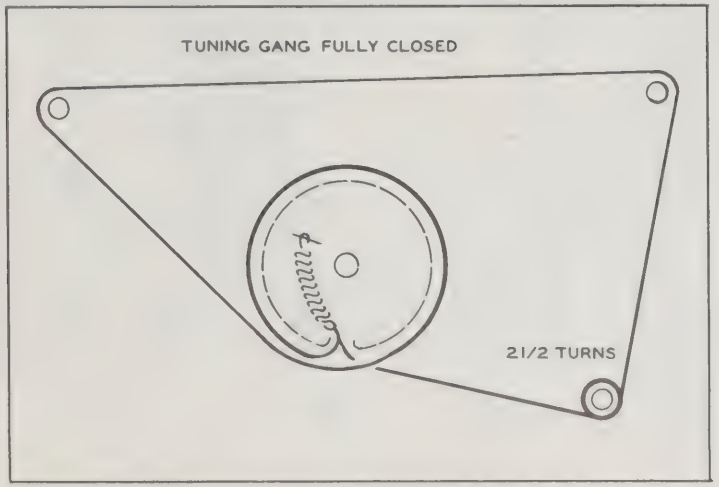
ITEM No.	USE	DC RES.		REPLACEMENT DATA	
		PRI.	SEC.	MAJESTIC PART No.	MEISSNER PART No.
L1	Loop Ant.	.2Ω	2Ω	1.525	
L2	Osc. Coil	.7Ω	5.8Ω	1.526	
L3	1st IF	18Ω	18Ω	1.445-5	
L4	2nd IF	18Ω	18Ω	1.445-5	

DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					MAJESTIC PART No.		
M1	Bayonet	6-8	.15	Brown			Type #47

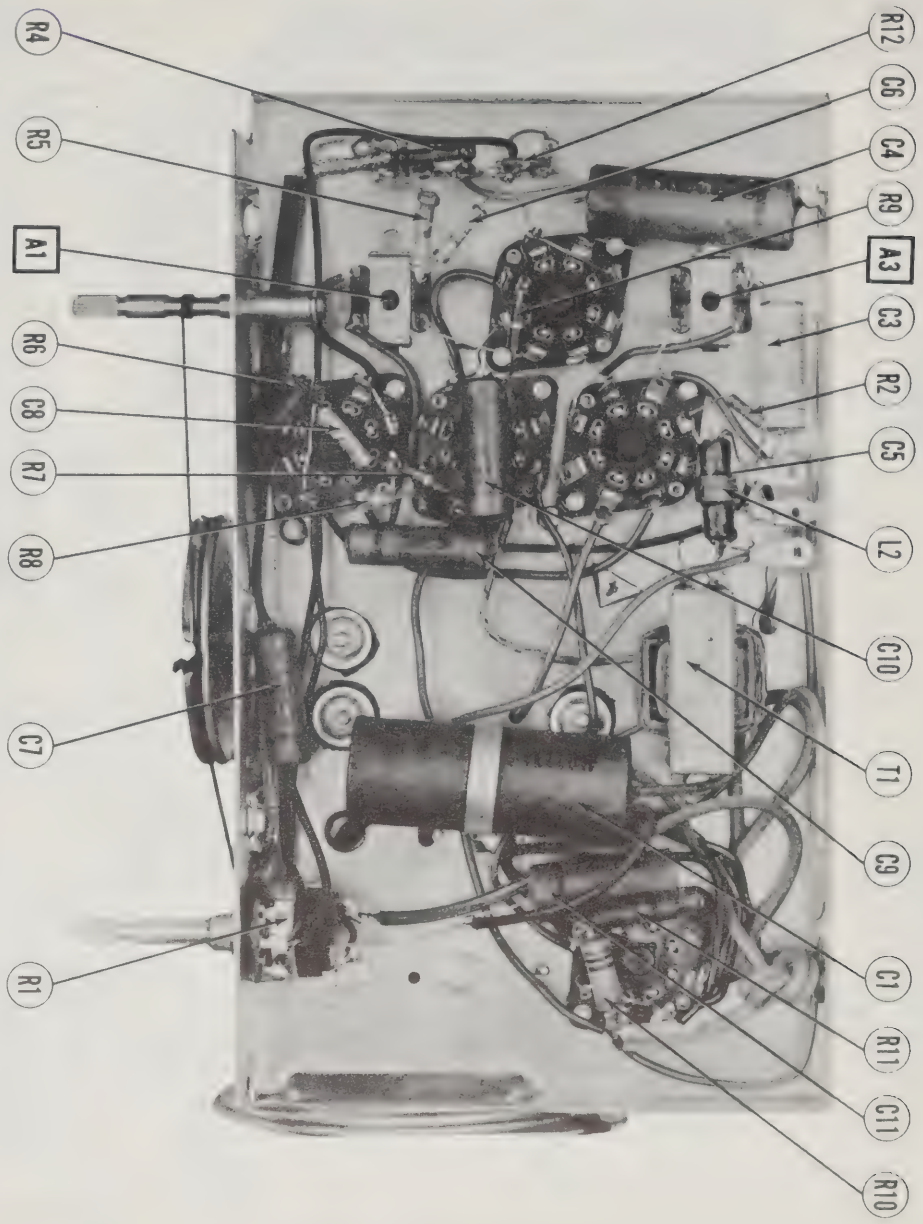
MISCELLANEOUS

ITEM No.	PART NAME	MAJESTIC PART No.	NOTES
M2	2 Gang Var. Cap.	2-223	(31-457MMF, 33-198MMF)

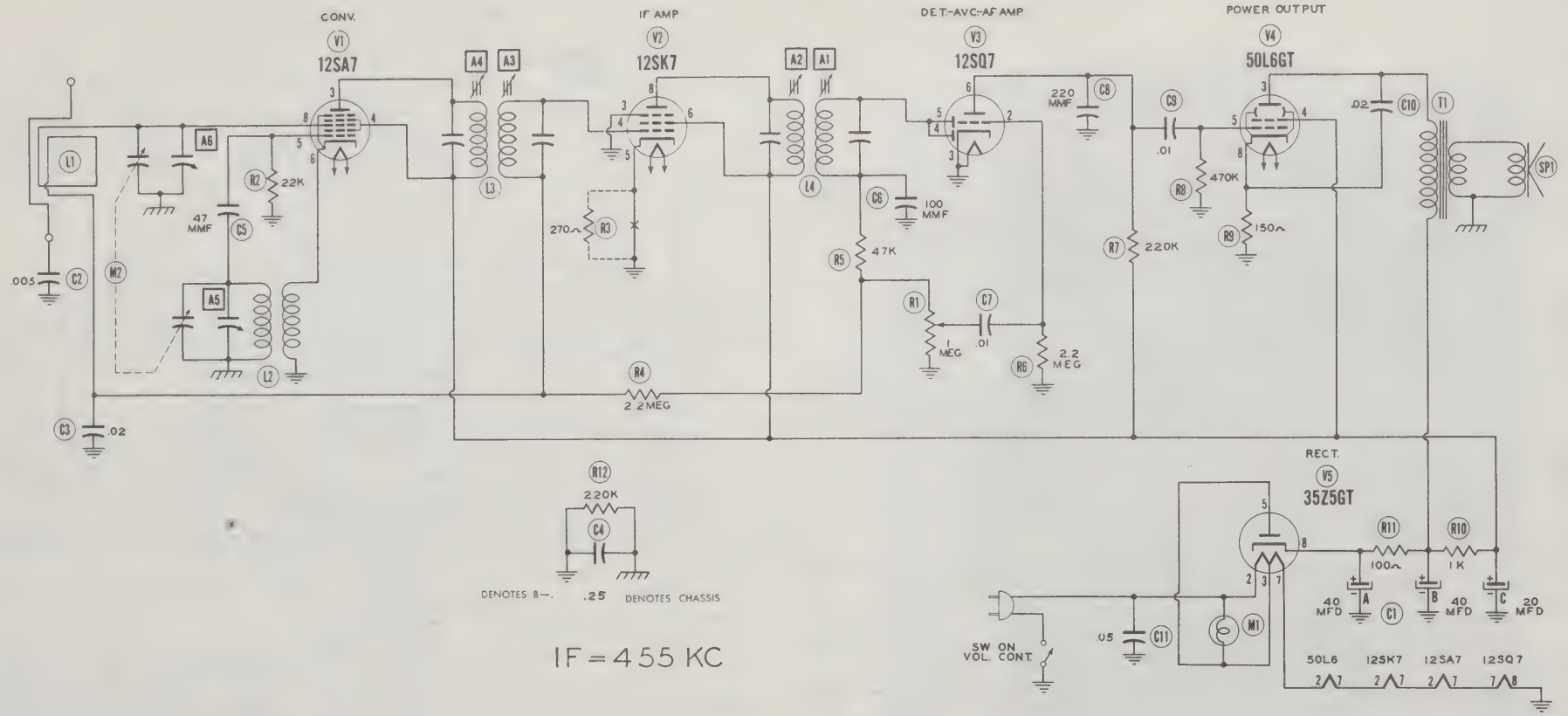


DIAL CORD DRIVE

CHASSIS—BOTTOM VIEW



MAJESTIC MODEL 51A5



IF = 455 KC

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	12SA7	0V	25VAC	80VDC	80VDC	§-8VDC	0V	12VAC	-.4VDC
V 2	12SK7	0V	37VAC	0V	-.4VDC	0V	80VDC	25VAC	80VDC
V 3	12SQ7	0V	-.4VDC	0V	-.4VDC	-.4VDC	45VDC	12VAC	0V
V 4	50L6GT	0V	85VAC	100VDC	80VDC	0V	0V	37VAC	5.7VDC
V 5	35Z5GT	0V	117VAC	108VAC	80VDC	108VAC	105VDC	85VAC	110VDC

§ TAKEN WITH VACUUM TUBE VOLTMETER

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	12SA7	220KΩ	26Ω	†1.1KΩ	†1.1KΩ	22KΩ	.7Ω	13Ω	3.2MEG
V 2	12 SK7	220KΩ	38Ω	0Ω	3.2Meg	0Ω	†1.1KΩ	26Ω	†1.1KΩ
V 3	12SQ7	220KΩ	2.2Meg	0Ω	1Meg	1Meg	†220KΩ	13Ω	0Ω
V 4	50L6GT	Inf.	85Ω	†275Ω	†1.1KΩ	470KΩ	Inf.	38Ω	150Ω
V 5	35Z5GT	Inf.	110Ω	105Ω	†1.1KΩ	105Ω	†100Ω	85Ω	50KΩ

† MEASURED FROM PIN 8 OF V5

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1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

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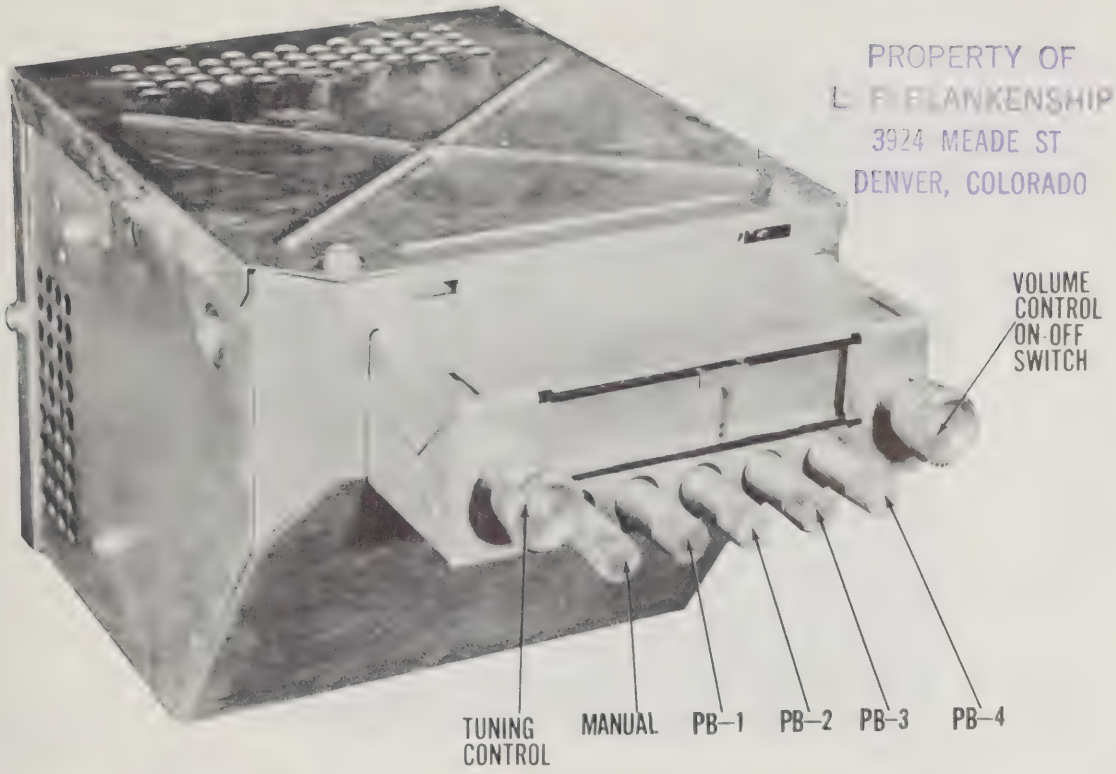

PHILCO MODEL
MODEL CR-505

PHILCO MODEL CR-505

TRADE NAME	Philco Model CR-505
MANUFACTURER	Philco Corp., Tioga & "C" Sts., Philadelphia, Pa.
TYPE SET	Battery Operated Universal Automotive Superheterodyne Receiver
TUBES (SIX)	Types 6BA6 RF Amp., 6BE6 Converter, 6BA6 IF Amp., 6AV6 DET-AVC-AF, 6AQ5 Power Output, 6X4 Rectifier
POWER SUPPLY	6 Volt storange Battery — RATING 6.6 Amp. @ 6.3 Volts DC
TUNING RANGE—BROADCAST	540-1605KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set dial pointer, turn tuning cores fully in and set pointer carriage against the stop on the left hand end of the dial backplate. Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.05MFD	High side to pin 7 (Grid) of 6BE6 (V2). Low side to chassis.	455KC (400~ mod)	Push manual button. Turn tuning cores fully out.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2.	Two 30MMF capacitors	Connect one capacitor from antenna connector to chassis. Connect high side of signal gen. thru other capacitor to antenna connector.	1605KC	"	"	A5, A6, A7	"
3.	"	"	455KC	Push button No.1	"	A8	Adjust for MINIMUM output.
4.	"	"	730KC	"	"	A9, A10	Turn button for maximum output, & then adjust antenna coil, mounting nut for maximum output.
5.	"	"	"	Push button No.2	"	A11, A12	"
6.	"	"	1000KC	Push button No.3	"	A13, A14	"
7.	"	"	1200KC	Push button No.4	"	A15, A16	"

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PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		PHILCO PART No.	STANDARD REPLACEMENT		
V1	RF Amplifier	6BA6	6BA6	7BK	
V2	Converter	6BE6	6BE6	7CH	
V3	IF Amplifier	6BA6	6BA6	7BK	
V4	DET.-AVC-AF	6AV6	6AV6	7BT	
V5	Power Output	6AQ5	6AQ5	7BZ	
V6	Rectifier	6X4	6X4	5BS	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA						IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1A	15	350	61-0089A	AF3318A		UP15S135C		TVL-3630	■ Filter
B	10	350							▲ Filter
C	20	25							Output Cathode
C2	.047	400	45-3505-45	P488-047	DF-503	PTE4S5		4TM-S47	AVC Filter
C3	.047	400	45-3505-45	P488-047	DF-503	PTE4S5		4TM-S47	Decoupling
C4	10		62-010009001	SI10	D6-100	5W5Q1	GP1K-10	19C19	RF Coupling
C5	330		62-133001001	SI330	D6-331	5W5T3	GP2K-330	19C14	RF Bypass
C6	220		62-122001001	SI220	D6-221	5W5T25	GP2K-220	19C13	Diode RF Filter
C7	.0047	600	45-3505-56	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Audio Coupling
C8	220		62-122001001	SI220	D6-221	5W5T25	GP2K-220	19C13	AF Amp. Plate
C9	.01	400	45-3505-41	P488-01	D6-103	PTE4S1	821-01	4TM-S1	Audio Coupling
C10	.022	600	45-3505-60	P688-022	DF-203	PTE6S2		6TM-S22	Output Plate
C11	.0047	1600	30-4661-1	P1688-0047		PTE16D5		MB-D47	Buffer
C12	330		62-133001001	SI330	D6-331	5W5T3	GP2K-330	19C14	Hash Filter
C13	.5	100	61-0137	P185-5				68P20	Hash Filter
C14	330		62-133001001	SI330	D6-331	5W5T3	GP2K-330	19C14	Hash Filter

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	PHILCO PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R1	350KΩ	½	33-5556-8				Volume Control and SW

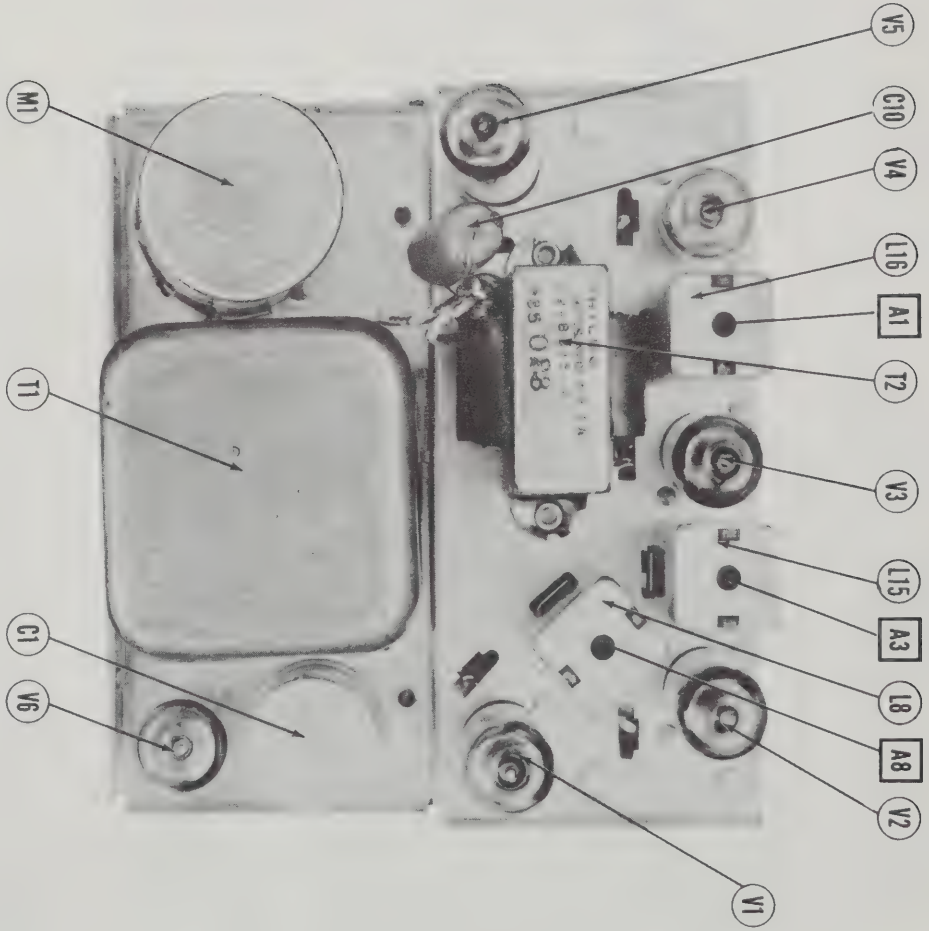
RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	PHILCO PART No.	IRC PART No.	
R2	68KΩ	½	66-3688340	BTS-68K	AVC Network
R3	56KΩ	½	66-3568340	BTS-56K	RF Coil Shunt
R4	270Ω	½	66-1278340	BTS-270	RF Amp. Cathode
R5	220Ω	½	66-1228340	BTS-220	RF Amp. Cathode
R6	10KΩ	½	66-3108340	BTS-10K	RF Amp. Plate
R7	3300Ω	½	66-2338340	BTS-3300	Conv. Grid
R8	22KΩ	½	66-3228340		Osc. Grid
R9	330Ω	½	66-1338340	BTS-330	IF Amp. Cathode
R10	27KΩ	1	66-3274340	BTA-37K	Screen Loading
R11	22Meg	½	66-5228340	BTS-2.2Meg	AVC Network
R12	10Meg	½	66-6108340	BTS-10Meg	AF Amp. Grid
R13	220KΩ	½	66-4228340	BTS-220K	AF Amp. Plate
R14	470KΩ	½	66-4478340	BTS-470K	Output Grid
R15	270Ω	1	66-1274340	BTA-270	Output Cathode
R16	2200Ω	1	66-2224340	BTA-2200	Filter
R17	82Ω	1	66-0824340	BW-1-82	Hash Suppressor
R18	82Ω	1	66-0824340	BW-1-82	Hash Suppressor

TRANSFORMER (VIBRATOR)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	PHILCO PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	6.3V @ 4.2A	560VCT .045ADC			32-8457			VT-4

CHASSIS—TOP VIEW



PROPERTY OF
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3924 MEADE ST.
DENVER, COLORADO

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING IMPEDANCE PRI.	RATING IMPEDANCE SEC.	RATING DC RES. PRI.	RATING DC RES. SEC.	REPLACEMENT DATA PHILCO PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA MERIT PART No.	REPLACEMENT DATA CHICAGO PART No.	INSTALLATION NOTES
T2	5.1KΩ	4.1Ω	320Ω	.3Ω	32-8315-1	A3877 ①			① File out mounting holes

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA PHILCO PART No.	REPLACEMENT DATA JENSEN PART No.	REPLACEMENT DATA QUAM PART No.	INSTALLATION NOTES
SP1	FIELD	V. C. IMP.	36-1638	ST10S MOD P6-X	6A15	
	PM	4.1Ω				
SP2	CONE DIA. 5 15/16"	V. C. DIA. 9/16"				

COILS (RF-IF)

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA PHILCO PART No.	REPLACEMENT DATA MEISSNER PART No.	REPLACEMENT DATA IRC PART No.	NOTES
L1	Ant. Choke	4Ω		32-4422-24		CL-1	5.6 Microhenries
L2	Ant. Coil	13Ω					Manual Tuning
L3	Ant. Coil	25Ω					Pushbutton #1
L4	Ant. Coil	22Ω					Pushbutton #2
L5	Ant. Coil	16Ω					Pushbutton #3
L6	Ant. Coil	16Ω					Pushbutton #4
L7	RF Coil	13Ω					Manual Tuning
L8	IF Tuning	32Ω	25Ω	32-4349			Pushbutton Tuning
L9	Osc. Coil	.7Ω	2.7Ω				Manual Tuning
L10	Osc. Coil	3.5Ω					Pushbutton #1
L11	Osc. Coil	3.3Ω					Pushbutton #2
L12	Osc. Coil	1.7Ω					Pushbutton #3
L13	Osc. Coil	1.6Ω					Pushbutton #4
L14	Osc. Coil Shunt	4.8Ω					Pushbutton #5 Tap at .7Ω
L15	1st IF	21Ω	21Ω	32-4160-6A			
L16	2nd IF	16Ω	16Ω	32-4161A			
L17	Hash Choke	.1Ω		32-4170			
L18	Hash Choke	0Ω		32-1374			

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA PHILCO PART No.	REPLACEMENT DATA AEROVOX PART No.	REPLACEMENT DATA CORNELL-DUBILIER PART No.	REPLACEMENT DATA RADIART PART No.	INSTALLATION NOTES
M1	INT.	6.3V	115v	83-0025	A-100	5326	5326	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA PHILCO PART No. FUSE	REPLACEMENT DATA PHILCO PART No. HOLDER	REPLACEMENT DATA LITTELFUSE PART No. FUSE	REPLACEMENT DATA LITTELFUSE PART No. HOLDER	REMARKS
M2	SFE	14A	45-2559		307014	155014	

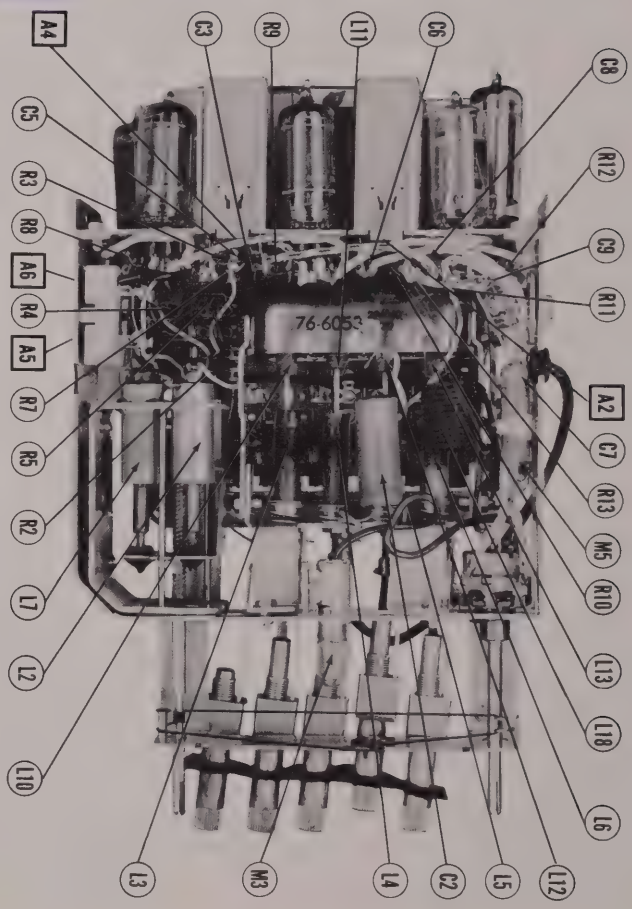
DIAL LIGHTS

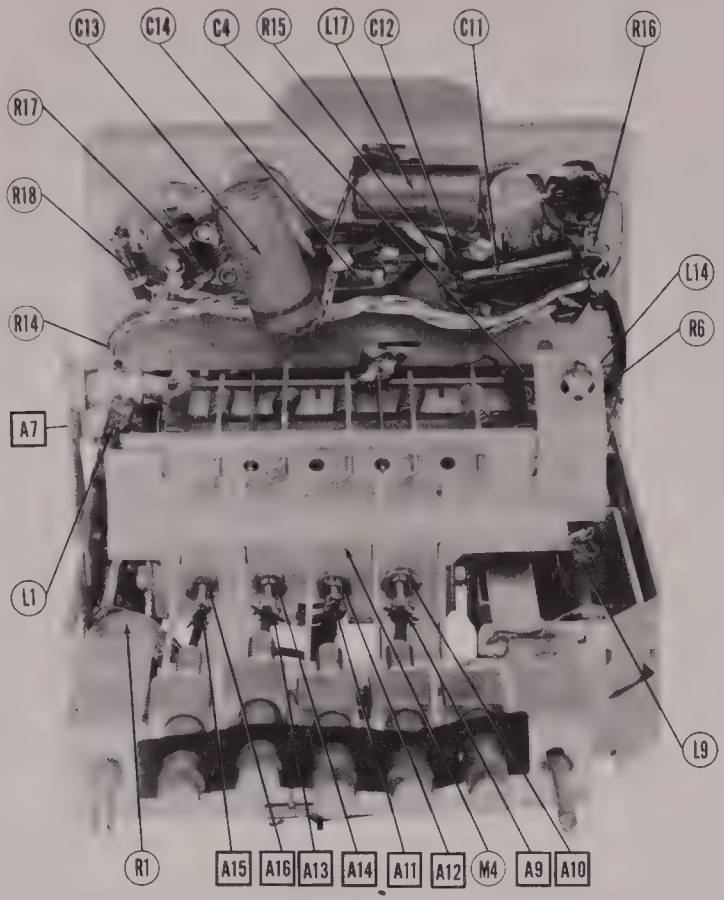
ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA PHILCO PART No.		NOTES
M3	Bayonet	6-8	.15	Brown			Type #47

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M4	Tuning Unit	76-6053	Includes Switch Assembly
M5	Spark Plate	30-1235	

CHASSIS—BOTTOM VIEW




C13
C14
C4
R15
L17
C12
C11
R16
R17
R18
L14
R14
R6
A7
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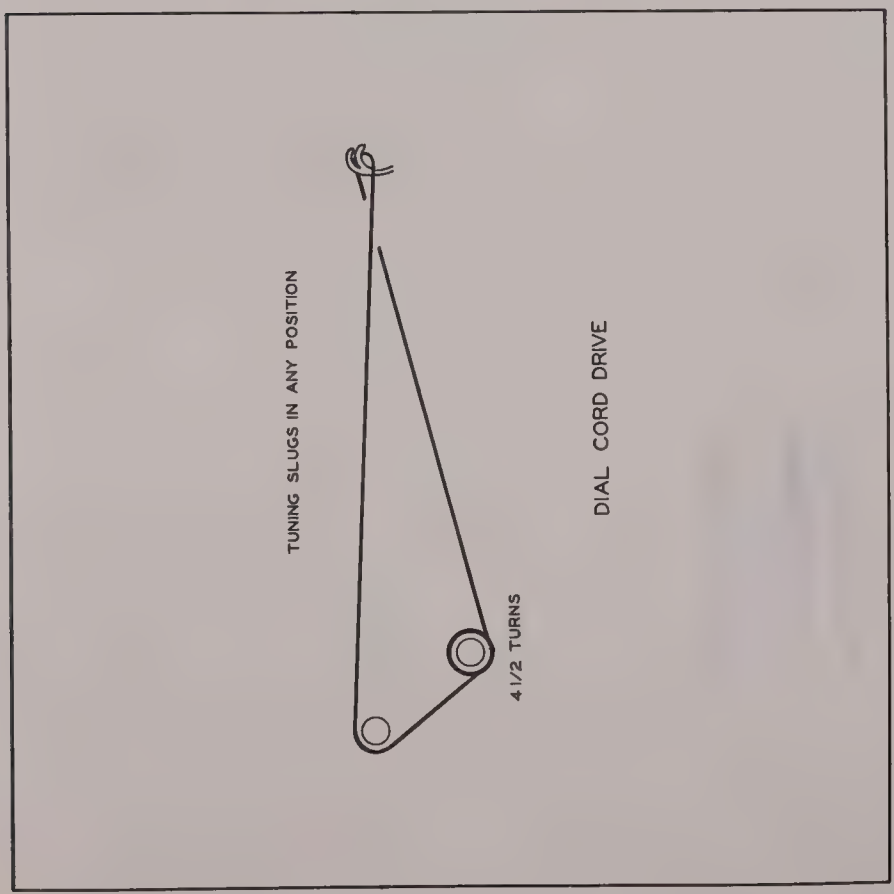
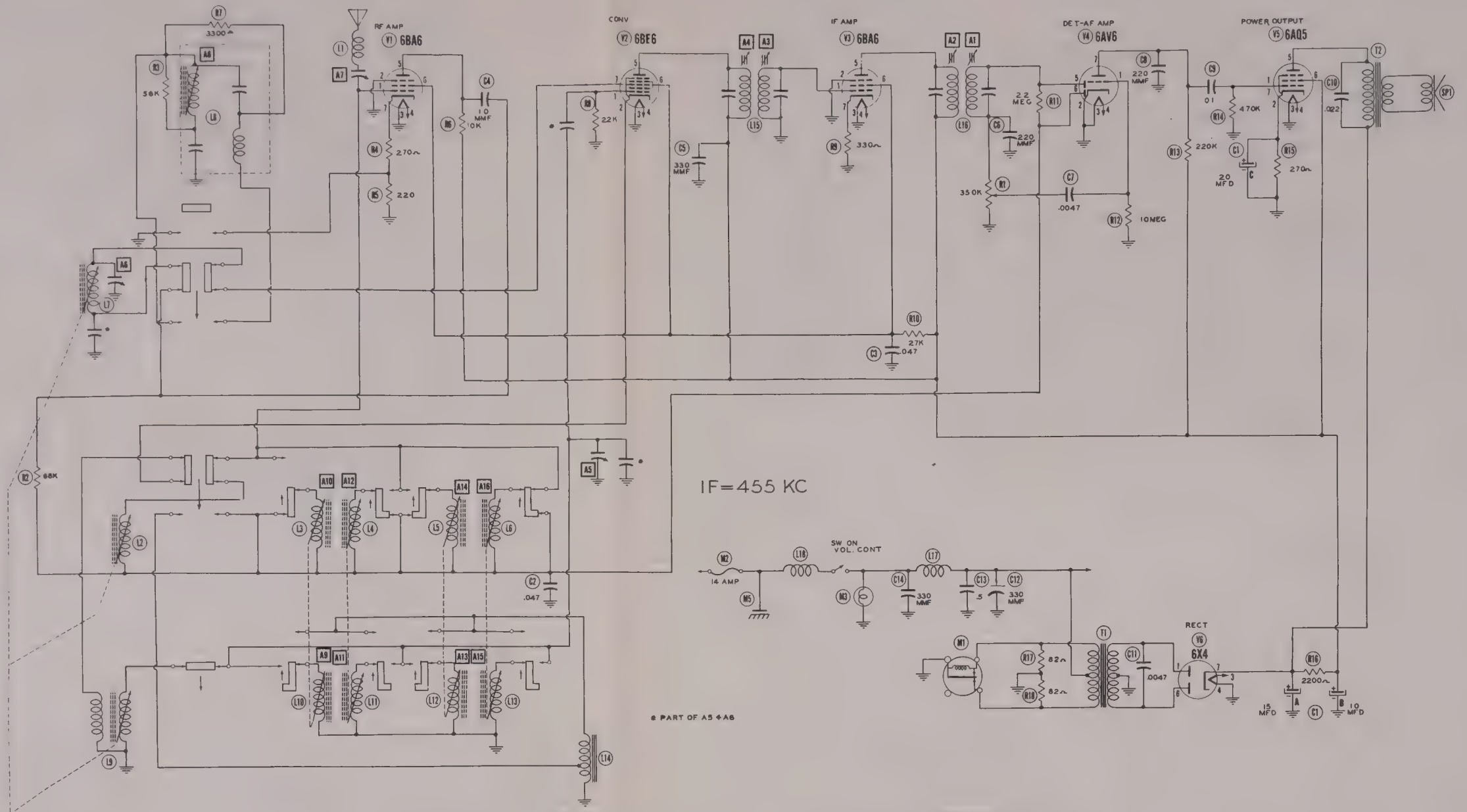
M4
A9
A10


TUNING SLUGS IN ANY POSITION
4 1/2 TURNS
DIAL CORD DRIVE



* PART OF A5 & A6

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	6BA6	-.6VDC	0V	0V	6.3VDC	170VDC	65VDC	1.8VDC
V 2	6BE6	5-2.4VDC	0V	6.3VDC	0V	195VDC	65VDC	-.6VDC
V 3	6BA6	0V	0V	0V	6.3VDC	195VDC	65VDC	1.6VDC
V 4	6AV6	-.6VDC	0V	0V	6.3VDC	-.6VDC	-.5VDC	85VDC
V 5	6AQ5	0V	10VDC	6.3VDC	0V	220VDC	185VDC	0V
V 6	6X4	265VAC	0V	6.3VDC	0V	0V	265VAC	230VDC

* TAKEN WITH VACUUM TUBE VOLTMETER

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	6BA6	2.5Meg	0Ω	0Ω	.4Ω	†12KΩ	†29KΩ	490Ω
V 2	6BE6	22KΩ	.7Ω	.4Ω	0Ω	†2.2KΩ	†29KΩ	2.6Meg
V 3	6BA6	2Ω	0Ω	0Ω	.4Ω	†2.2KΩ	†29KΩ	330Ω
V 4	6AV6	10Meg	0Ω	0Ω	.4Ω	2.5Meg	350KΩ	†222KΩ
V 5	6AQ5	470KΩ	470Ω	.8Ω	0Ω	†320Ω	†2.2KΩ	470KΩ
V 6	6X4	480Ω	Inf.	.4Ω	0Ω	Inf.	480Ω	50KΩ

V & R TAKEN IN MANUAL TUNING

† MEASURED FROM PIN 7 OF V6

THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

1 - DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1000 ohms per volt.
2 - Socket connections are shown as bottom views.
3 - Measured values are from socket pin to common negative.
4 - Battery voltage maintained at 6.3 volts for voltage readings.
5 - Nominal tolerance on component values makes possible a variation of ± 15% in voltage and resistance readings.
5 - Volume control at maximum, no signal applied for voltage measurements.

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3924 MEADE ST.
DENVER, COLORADO

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DENVER, COLORADO

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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PROPERTY OF
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3924 MEADE ST
DENVER, COLORADO

PHILCO
MODEL 51-1330

PHILCO
MODEL 51-1330

TRADE NAME	Philco, Model 51-1330
MANUFACTURER	Philco Corp., Tioga & "C" Sts., Philadelphia, Pa.
TYPE SET	AC Operated Combination Phono-Radio, Superheterodyne Receiver with Loop Antenna
TUBES (FIVE)	Types 7A8 Converter, 7B7 IF Amp., 7C6 Det-AVC-AF, 50L6GT Power Output, 35Z5GT Rectifier
POWER SUPPLY	105-120 Volts AC
RATING	.24 Amp. @ 117 Volts AC
TUNING RANGE—BROADCAST	540-1620KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer, turn tuning gang fully closed and set pointer to the index dot near the left hand end of the dial backplate. Use isolation transformer if available. If not connect a .1MFD capacitor in series with low side of signal generator and B-. Loop should be maintained in same relative position to chassis as when receiver is in cabinet. Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting. A4 not used in early productions.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.01MFD	High side to pin 6 (Grid) of 7A8 (V1). Low side to chassis	455KC (400~ Mod)	Tuning gang fully open	Across voice coil	A1, A2 A3, A4	Adjust for maximum output. If isolation transformer is not used, reduce dummy antenna to .001MFD to reduce hum modulation
2.		Loop	1600KC	Set pointer to last calibration dot near right hand end of dial backplate.	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.		"	1500KC	Tune for max. output.	"	A6	"

RECORD CHANGER -- PHILCO MODEL M22

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PARTS LIST AND DESCRIPTIONS

PHILCO
MODEL 51-1330

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		PHILCO PART No.	STANDARD REPLACEMENT		
V1	Converter	7A8	7A8	8U	
V2	IF Amplifier	7B7	7B7	8V	
V3	Det.-AVC-AF	7C6	7C6	8W	
V4	Power Output	50L6GT	50L6GT	7AC	
V5	Rectifier	35Z5GT	35Z5GT	6AD	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA						IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	Philco PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1A	40	150	30-2575-32	E58C37		EZ55515C		TVA-3451	Filter
B	40	150						TVA-1205	Filter
C	40	150							Filter
D	25	25							Output Cathode
C2	.1	200	61-0113	P288-1	DF-104	PTE4P1		2TM-P1	AVC Filter
C3	47	500	60- 00515307	1468-00005	D6-470	5W5Q5	GP1K-47	1FM-45	Osc. Grid Cap
C4	7.5		30-1224-65						Fixed Trimmer
C5	.1	400	61-0113	P488-1	DF-104	PTE4P1		4TM-P1	Line Isolation
C6	.1	200	61-0113	P288-1	DF-104	PTE4P1		2TM-P1	Decoupling
C7	.01	600	61-0120	P688-01	D6-103	PTE6S1	821-01	6TM-S1	Audio Coupling
C8A	7000		30-1239-4	BPD-01	DD-103	PTE4S1	821-01	36C1	Audio Coupling
B	220			S1220	D6-221	5W5T25	GP2K-220	19C13	Output Grid
C9	.022	400	45-3505-43	P488-022	DF-203	PTE4S2		4TM-S22	Output Plate
C10	.1	400	61-0113	P488-1	DF-104	PTE4P1		4TM-P1	RF Bypass
C11	.04	400	45-3505-62	P688-04	DF-503	PTE6S4		6TM-S4	Line Filter

CONTROLS

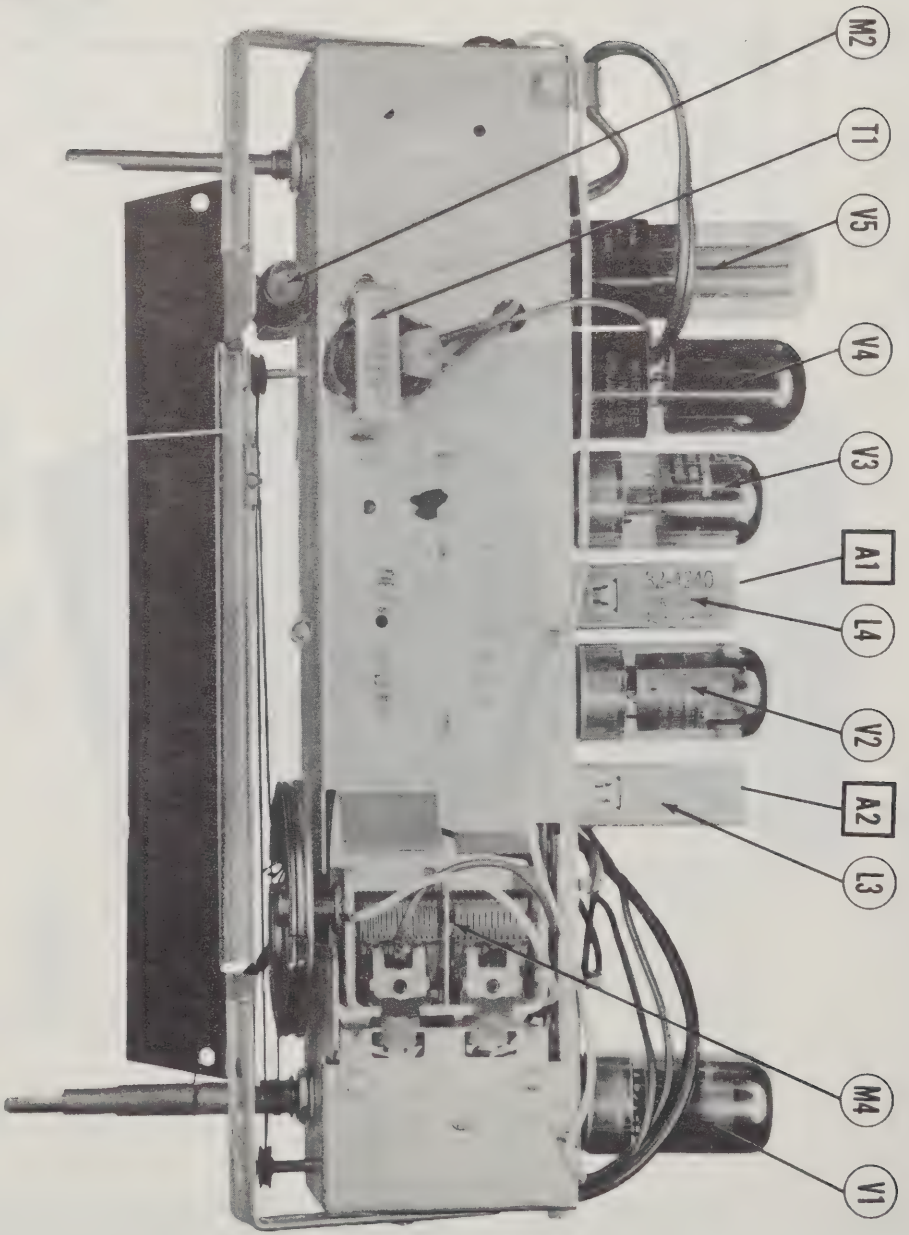
ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	PHILCO PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R1A	2Meg	½	33-5564-11	Q13-319	AG-66-Z	B-76-S	Volume Control
B	Shaft		Not Req	Not Req	FS-3	Not Req	Attach to R1A per instructions
C	Switch		Not Req	76-1	SWB	Not Req	Attach to R1A per instructions

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	PHILCO PART No.	IRC PART No.	
R2	100KΩ	½	66-4108340		Osc. Grid
R3	27KΩ	½	66-3278340		Screen Loading
R4	470KΩ	½	66-4478340	BTS-470K	AVC Network
R5	47KΩ	½	66-3478340	BTS-47K	Diode Filter
R6	2.2Meg	½	66-5228340	BTS-2.2Meg	AVC Network
R7	10Meg	½	66-6108340	BTS-10Meg	AF Amp. Grid
R8	470KΩ	½	66-4478340	BTS-470K	AF Amp. Plate
R9	470KΩ	½	66-4478340	BTS-470K	Output Grid
R10	130Ω	½	66-1128340	BTS-120	Output Cathode
R11	1200Ω	½	66-2128340	BTS-1200	Filter
R12	220Ω	2	66-1225340	BW-2-220	Filter
R13	150KΩ	½	66-4158340	BTS-150K	Isolation
R14	*	½	33-1343-3		Fil. Dropping

*880Ω Cold, 100Ω Hot.

CHASSIS—TOP VIEW



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DENVER, COLORADO

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		PHILCO PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T1	2.4KΩ	3Ω	220Ω	.8Ω	32-8384	A-3332 ①	A-3025 ①	RO-2	① Drill new mounting hole

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			INSTALLATION NOTES
			PHILCO PART No.	JENSEN PART No.	QUAM PART No.	
	FIELD	V. C. IMP.		ST-803		
SP1	PM	3Ω	36-1639	Mod. P525-V	52A1	
	CONE DIA.	V. C. DIA.				
SP2	5 1/8"	1/16"				

R F COILS

ITEM No.	USE	DC RES.		REPLACEMENT DATA		
		PRI.	SEC.	PHILCO PART No.	MEISSNER PART No.	
L1	Loop Ant.	.1Ω	3.5Ω	76-2127-11		
L2	Osc. Coil	2.7Ω	7.5Ω	32-4263		
L3	1st IF	13Ω	13Ω	32-4160A		
L4A	2nd IF	32Ω	24Ω	32-4454-1A		
B	2nd IF	17Ω	17Ω	32-4240		Used in Run 2

PHONO CARTRIDGE and NEEDLE

ITEM No.	REPLACEMENT DATA							REMARKS
	PHILCO PART No.	ASTATIC PART No.		SHURE PART No.		ELECTRO-VOICE PART No.		
		CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	
M1	76-4649							

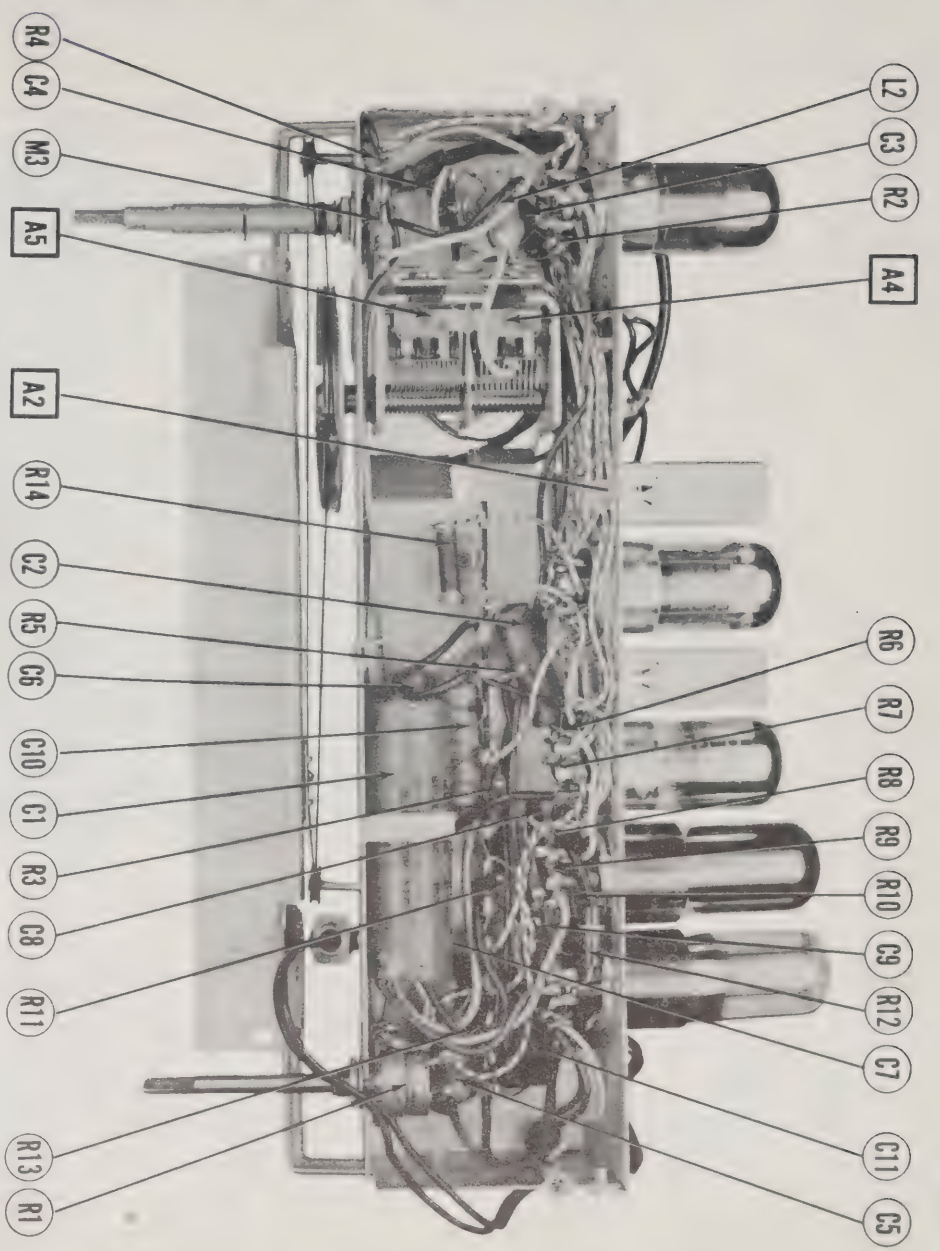
DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					PHILCO PART No.		
M2	Bayonet	6-8	.15	Brown	34-2068		Type #47

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M3	Switch	42-1949	Radio-Phono
M4	2 Gang Var. Cap.	31-2751-9	(33-542MMF, 259-216MMF)
	Cabinet	10840-2	
	Dial Scale	54-5107	
	Dial Pointer	56-5630-31FCP	

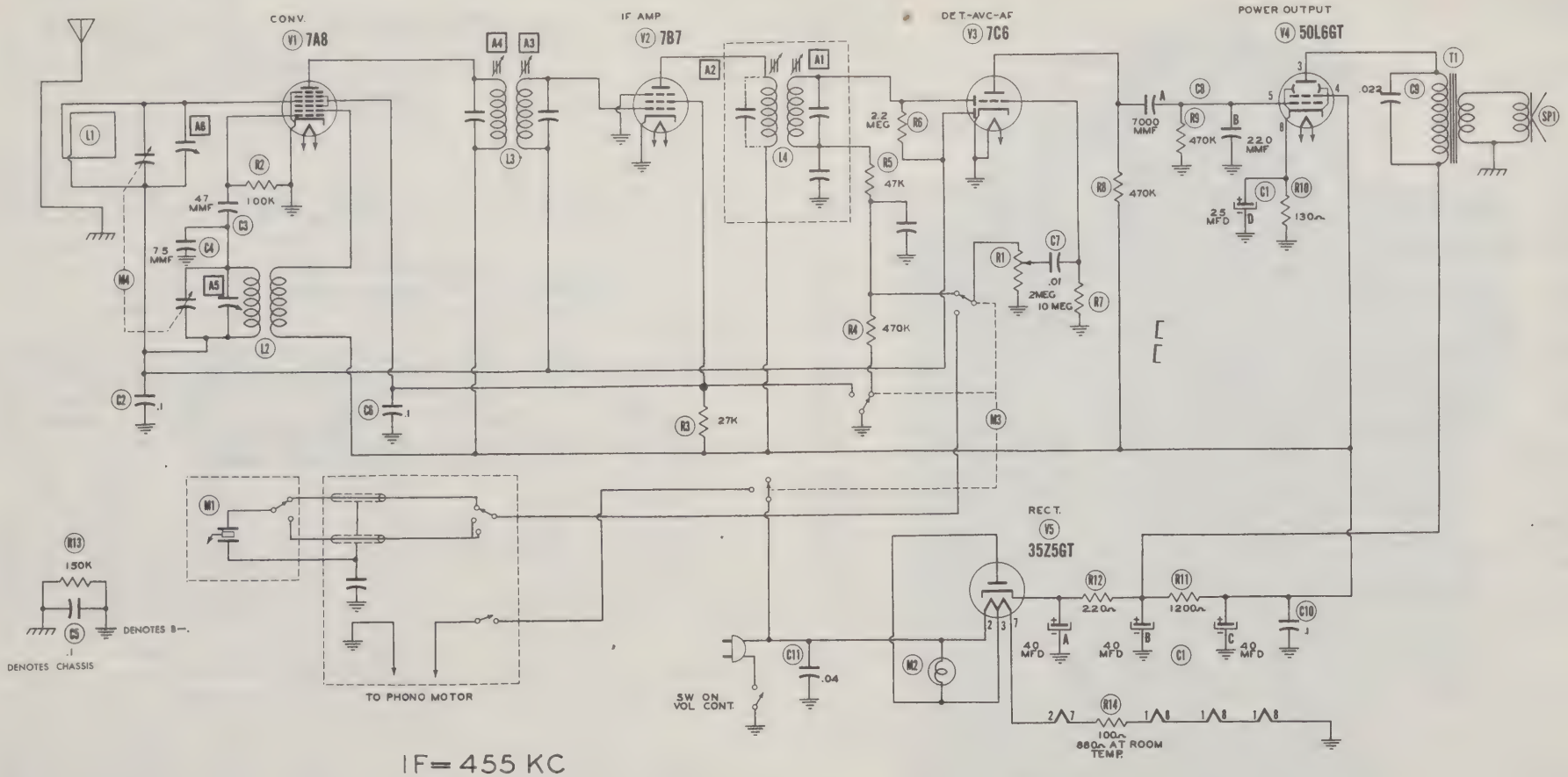
CHASSIS—BOTTOM VIEW



SET 130 FOLDER 11

PHILCO MODEL 51-1330

PHILCO MODEL 51-1330



IF = 455 KC

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	7A8	13VAC	95VDC	95VDC	8-7.9VDC	45VDC	-.4VDC	0V	6VAC
V 2	7B7	18VAC	95VDC	47VDC	0V	0V	-.4VDC	0V	13VAC
V 3	7C6	6VAC	60VDC	-.6VDC	0V	-.4VDC	-.2VDC	0V	0V
V 4	50L6GT	0V	83VAC	100VDC	95VDC	0V	105VDC	35VAC	5.8VDC
V 5	35Z5GT	0V	117VAC	110VAC	0V	110VAC	0V	83VAC	115VDC

‡ TAKEN WITH VACUUM TUBE VOLTMETER

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	7A8	15Ω	†1.4KΩ	†1.4KΩ	100KΩ	†28KΩ	2.7Meg	0Ω	8Ω
V 2	7B7	22Ω	†1.4KΩ	†28KΩ	0Ω	0Ω	2.7Meg	0Ω	15Ω
V 3	7C6	8Ω	†490KΩ	10Meg	0Ω	2.7Meg	500KΩ	0Ω	0Ω
V 4	50L6GT	0Ω	850Ω	†440Ω	†1.4KΩ	470KΩ	†220Ω	800Ω	130Ω
V 5	35Z5GT	Inf.	975Ω	965Ω	Inf.	965Ω	Inf.	850Ω	20KΩ

RADIO-PHONO SWITCH IN RADIO POSITION

† MEASURED FROM PIN 8 OF V5

THE COOPERATION OF THE MANUFACTURER OF THIS
RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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130-11

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

PHOTOFACT* Folder

SILVERTONE MODELS
179-16, 180-16, 194-16, 195-16
(CH. 132.890)

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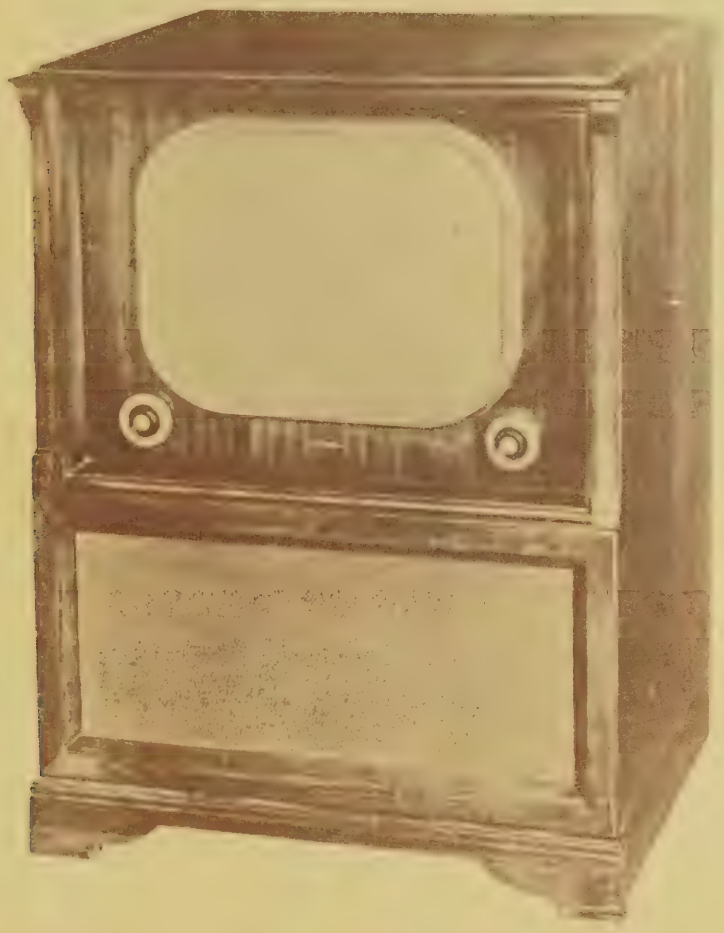

MODEL 195-16

SILVERTONE MODELS
179-16, 180-16, 194-16, 195-16
(CH. 132.890)

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Date 4/51 Set No. 130—Folder No. 12

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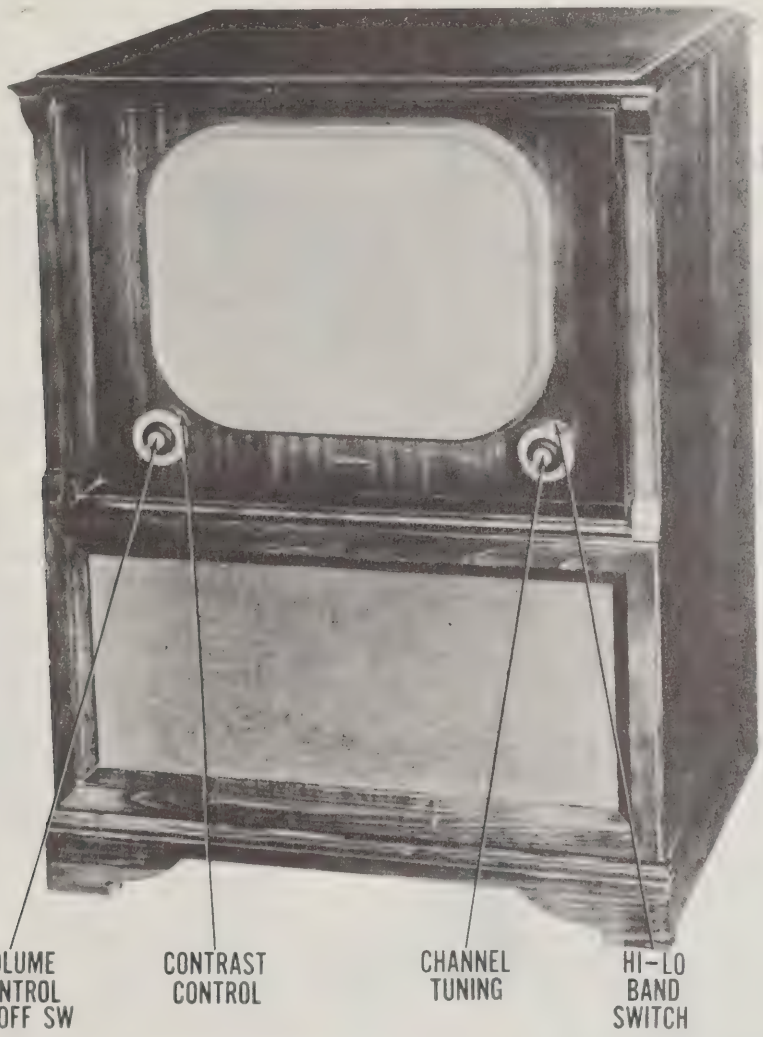
DENVER, COLORADO



SILVERTONE MODEL 195

TRADE NAME	Silvertone, Models 179, 180, 194, 195, (Ch. 132.890)
SUPPLIER	Sears, Roebuck & Co., 925 S. Homan Ave., Chicago, Illinois
TYPE SET	Television Receiver
TUBES	Twenty

POWER SUPPLY 110-120 Volts AC - 60 Cycle RATING 1.8 Amp. @ 117 Volts AC
TUNING RANGE—Channels 2 thru 13

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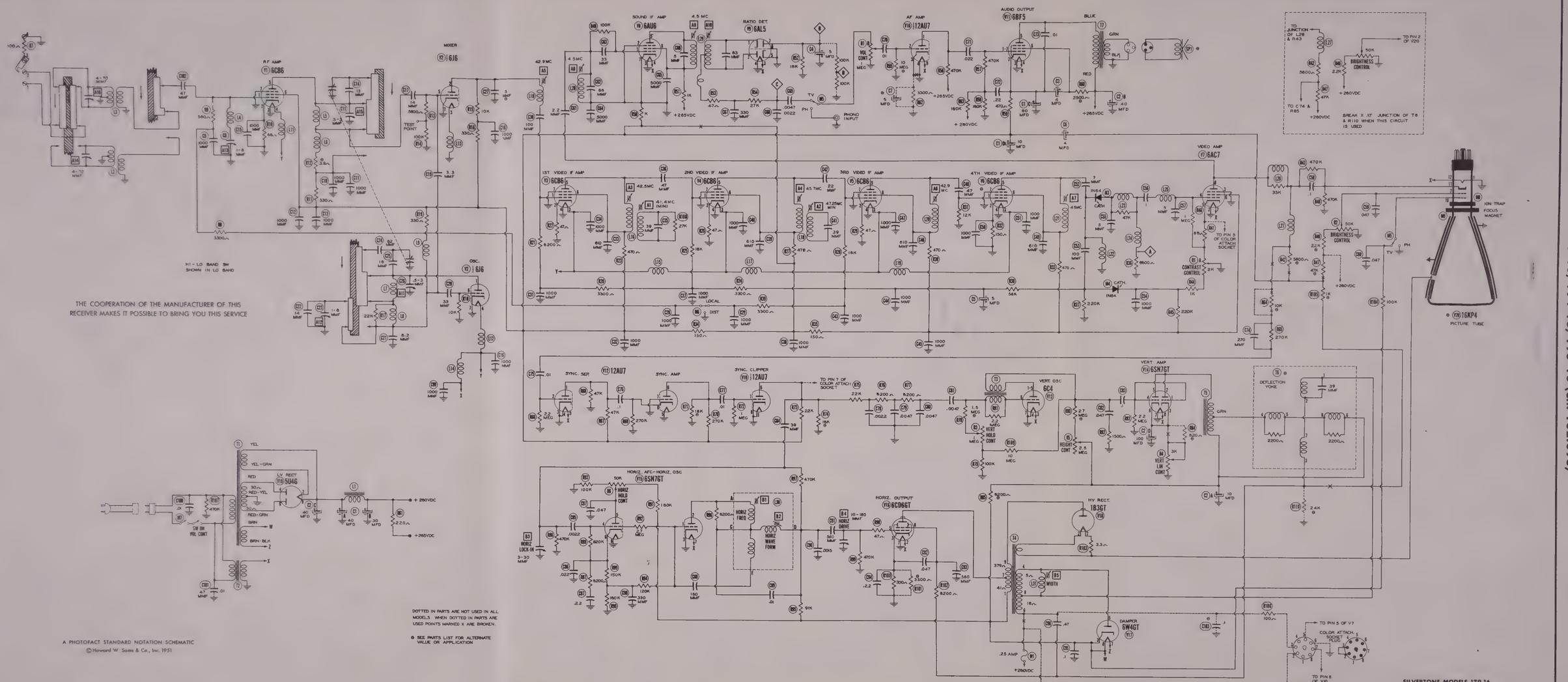
SILVERTONE MODELS 179-16, 180-16, 194-16, 195-16 (Ch. 132.890)



THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

DOTTED IN PARTS ARE NOT USED IN ALL MODELS WHEN DOTTED IN PARTS ARE USED POINTS MARKED X ARE BROKEN.

⊙ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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SILVERTONE MODELS 179-16, 180-16, 194-16, 195-16 (Ch. 132.890)

SILVERTONE MODELS 179-16, 180-16, 194-16, 195-16 (Ch. 132.890)

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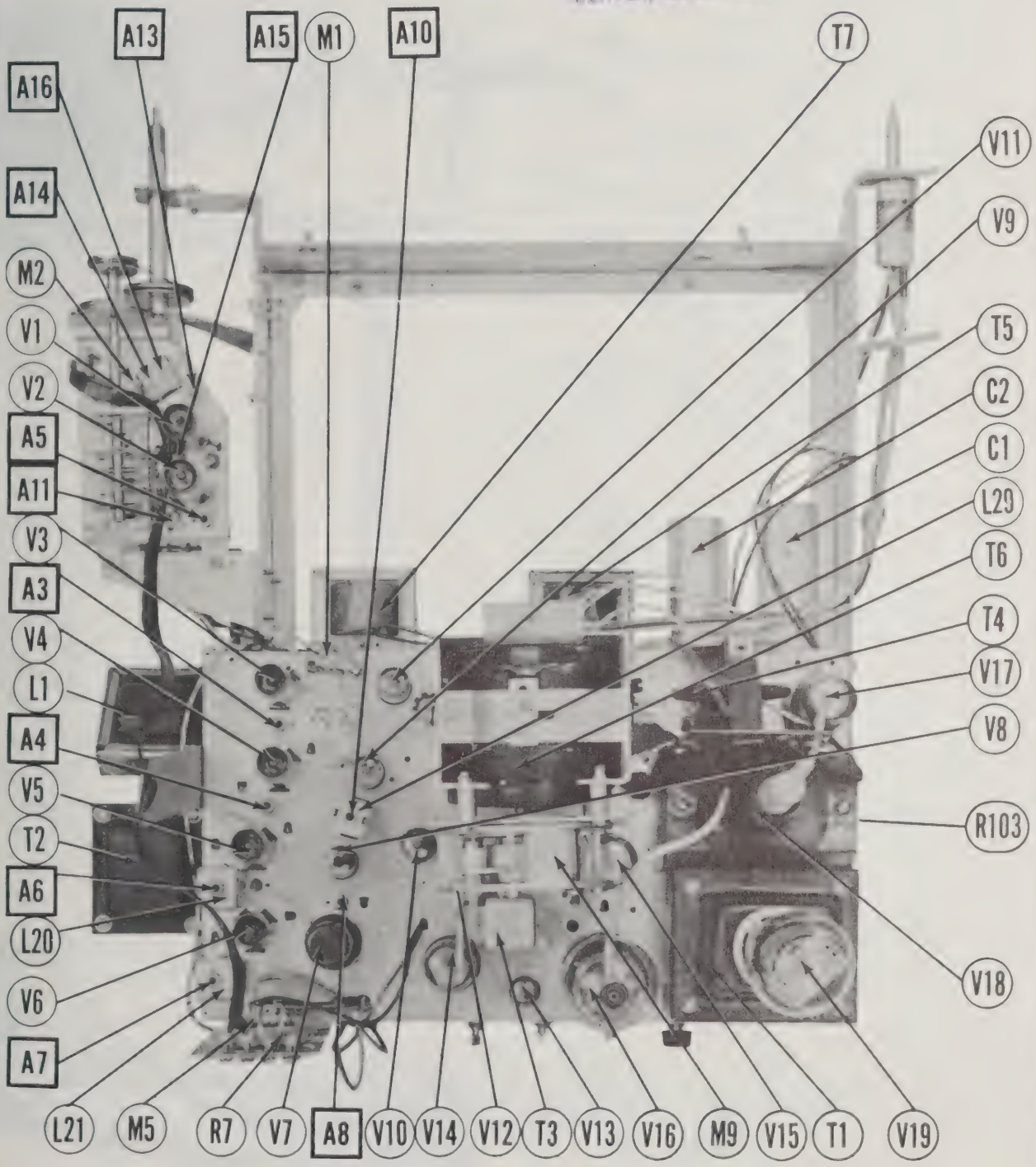

CHASSIS TOP VIEW

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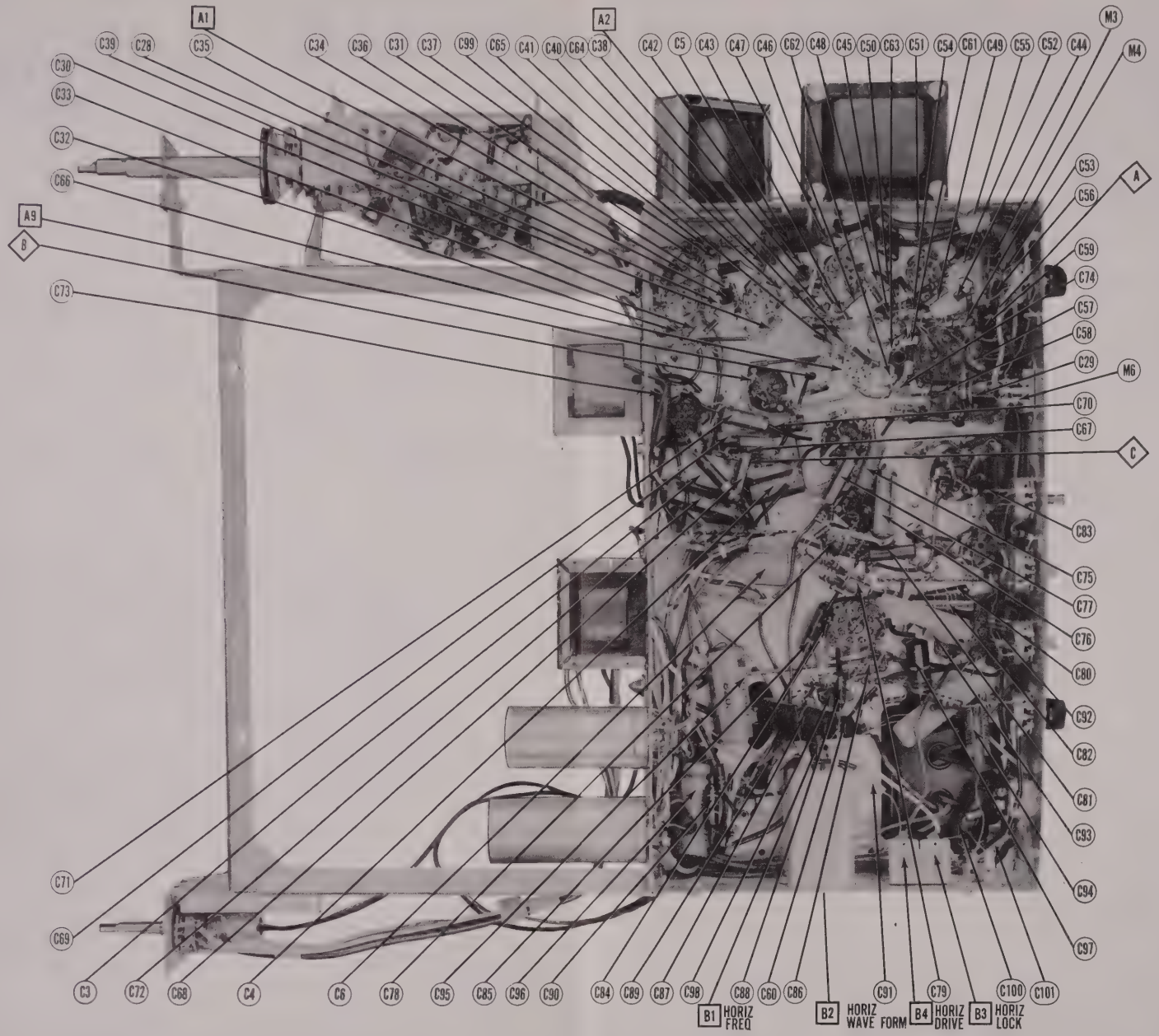

CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION

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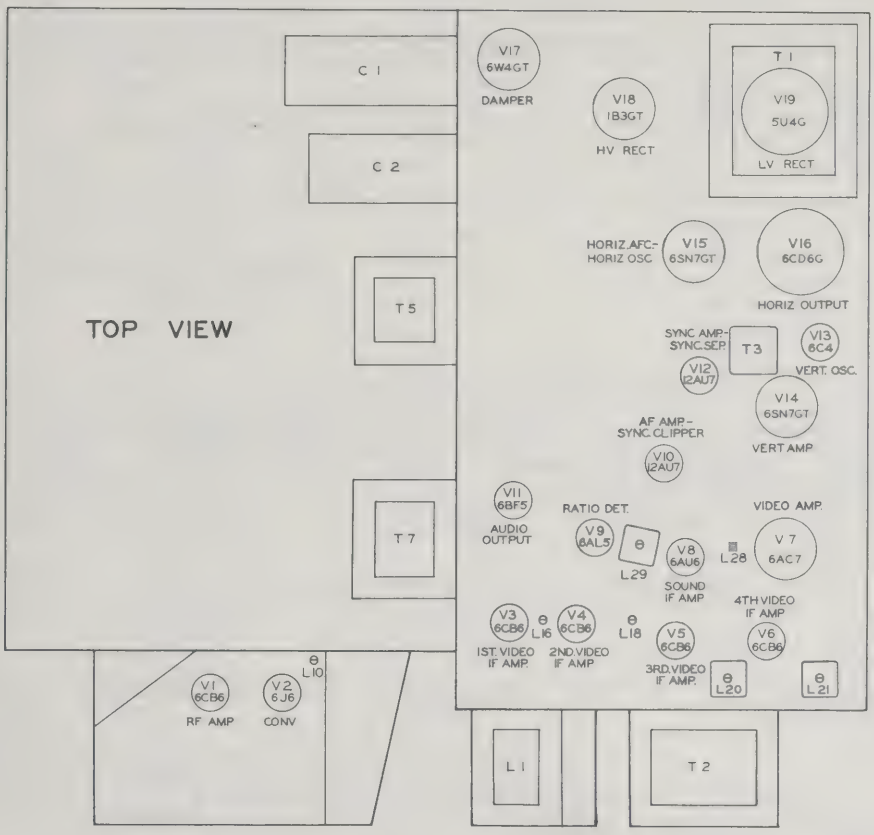

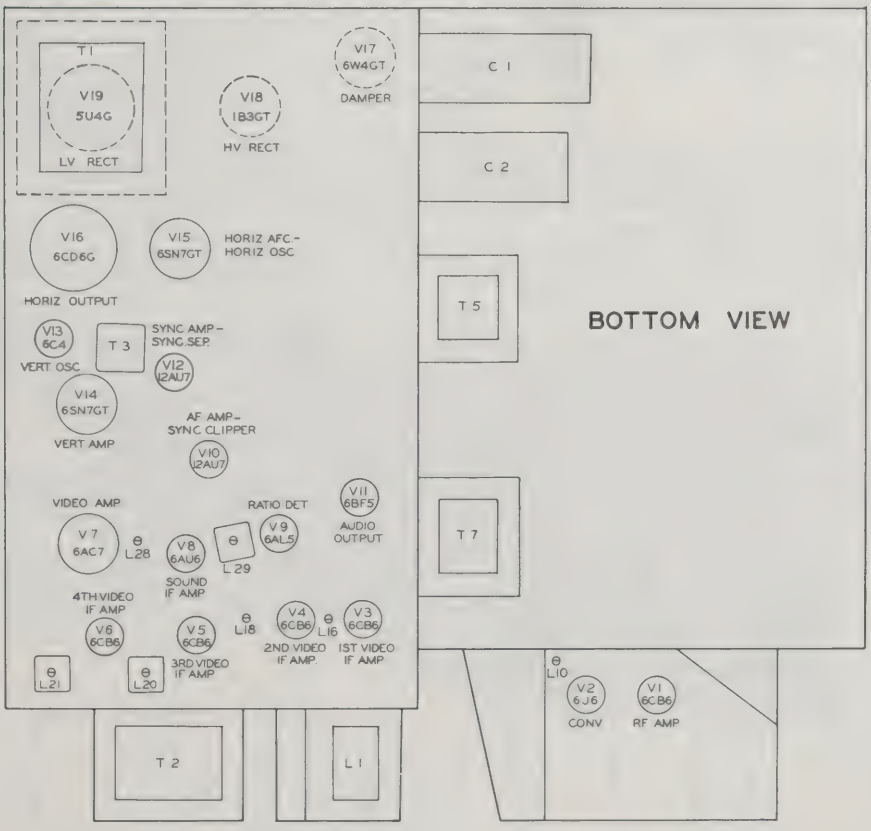

TUBE PLACEMENT CHART

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The high voltage shock hazard may be eliminated by removing the horizontal oscillator tube (V15) from its socket.

VIDEO IF ALIGNMENT

Remove the converter tube (V2) and replace it with a 6J6 which has pin 1 removed, this will disable the local oscillator and prevent the possibility of erroneous indications. Connect the negative lead of a 3 volt battery to the junction of R38 and C5, connect the positive lead to chassis.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1.	Direct	High side to an ungrounded tube shield floating over dummy converter tube (V2). Low side to chassis.	41.4MC (Unmod.)	Any	DC probe to Point (A). Common to chassis.	A1	Adjust for MINIMUM deflection.
2.	"	"	47.25MC	"	"	A2	"
3.	"	"	42.5MC	"	"	A3	Adjust for maximum deflection. Attenuate signal generator to maintain 2 volt reading.
4.	"	"	45.75MC	"	"	A4	"
5.	"	"	42.9MC	"	"	A5, A6	"
6.	"	"	45.0MC	"	"	A7	"

OVERALL VIDEO IF RESPONSE CHECK

Connect a 27KΩ isolating resistor in series with the oscilloscope vertical input, and a 250MMF capacitor across the vertical input terminals. Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
7.	Direct	High side to an ungrounded tube shield floating over dummy converter tube (V2). Low side to chassis.	45MC (10MC SWP)	41.4MC 42.75MC 45.75MC 47.25MC	Any	Vert. amp. thru 27KΩ to Point (A). Low side to chassis.		Check for response curve similar to figure 1. If necessary retouch A1 thru A6 for proper response.

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Connect two matched 100KΩ (±1%) resistors in series from Point B to chassis. The junction of these two resistors is alignment Point D as shown on the schematic.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
8.	.01MFD	High side to pin 4 (grid) of 6AC7 (V7). Low side to chassis.	4.5MC (Unmod.)	Any	DC probe to Point (B). Common to chassis.	A8, A9	Adjust for maximum deflection.
9.	"	"	"	"	DC probe to Point (C). Common to Point (D).	A10	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60 ∿ modulation and 450KC sweep. Use 120 ∿ sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8.	.01MFD	High side to pin 4 (grid) of 6AC7 (V7). Low side to chassis.	4.5MC (450KC SWP)	4.5MC	Any	Vert. amp. to Point (B). Low side to chassis.	A8, A9	Disconnect stabilizer capacitor C4. Adjust for maximum amplitude and symmetry as per figure 2.
9.	"	"	"	"	"	Vert. amp. to Point (C). Low side to chassis.	A10	Reconnect capacitor C4. Adjust A10 so 4.5MC occurs at center of crossover lines as per figure 3. SLIGHTLY retouch A9 for maximum amplitude and straightness of crossover lines.

HIGH BAND OSCILLATOR ALIGNMENT

Turn the band switch to "high band" (counter-clockwise). Remove the dummy converter tube and replace the original 6J6 in its socket. The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
10.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	258.5MC (Unmod.)	Tuning gang fully open.	Vert. amp. to Point (E). Low side to chassis.	A 11	Adjust for zer beat indication on scope. This will be indicated by a narrow trace between two wide traces.
11.	"	"	Approx. 219.5MC	Tuning gang fully closed.	"	L7	Vary generator frequency until zero beat occurs. If zero beat occurs above 219.5MC compress L7 turns slightly. If zero beat occurs below 219.5MC expand L7 turns slightly. Repeat steps 10 and 11 until high band oscillator cover exactly 219.5MC to 258 .5MC.

LOW BAND OSCILLATOR ALIGNMENT

Turn the band switch to "low band" (clockwise).

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
12.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	130.5MC (Unmod.)	Tuning gang fully open.	Vert. amp. to Point (E). Low side to chassis.	A12	Adjust for zero beat on scope.
13.	"	"	Approx. 99MC	Tuning gang fully closed.	"	L8	Vary generator frequency for zero beat. If zero beat occurs below 99MC spread L8 turns slightly. If zero beat occurs above 99MC compress L8 turns slightly. Repeat steps 12 and 13 until low band oscillator covers exactly 99MC to 130.5MC.

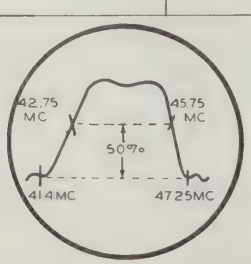

FIG. 1

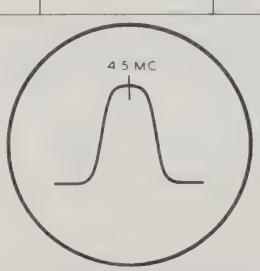

FIG. 2

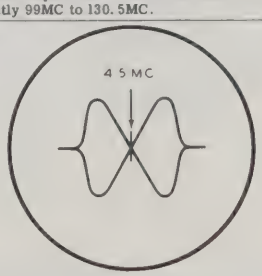

FIG. 3

ALIGNMENT INSTRUCTIONS (CONT.)

IF TRAP ADJUSTMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
14.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	44MC (Unmod.)	Any	DC probe to Point A. Common to chassis.	A13	Adjust for MINIMUM deflection.

HIGH BAND RF ALIGNMENT

Turn the band switch to "high band" (counter-clockwise).

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
15.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	201MC (10MC SWP)	42.75MC 45.75MC	11	Vert. amp. to Point A. Low side to chassis.	A14, A15	Adjust for maximum amplitude of response curve. If peaks can not be made even, re-check video IF alignment. For this step peaks must be even as shown in step 4.
16.	"	"	213MC (10MC SWP)	"	13	"		Check the response curve on all high channels. If the response curve on any channel fails to fall within the limits shown in figures 4A and 4B, expand or compress turns of L5 and repeat steps 15 and 16 until all high band channels fall within the proper limits.

LOW BAND RF ALIGNMENT

Turn the band switch to "low band" (clockwise).

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
17.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	79MC (10MC SWP)	42.75MC 45.75MC	5	Vert. amp. to Point A. Low side to chassis.	A16, L6	Adjust A16 and turns of L6 for maximum amplitude of response curve.
18.	"	"	85MC (10MC SWP)	"	6	"		Check to see that all low band channels fall within the limits of figure 4A and 4B.
			69MC (10MC SWP)		4			
			63MC (10MC SWP)		3			
			57MC (10MC SWP)		2			

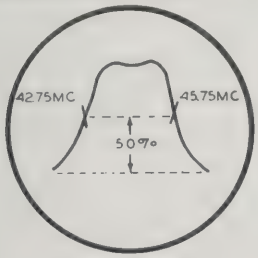

FIG.4

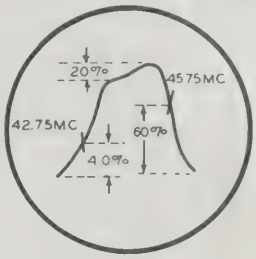

FIG.4A

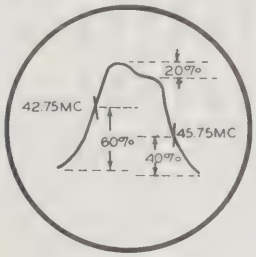

FIG.4B

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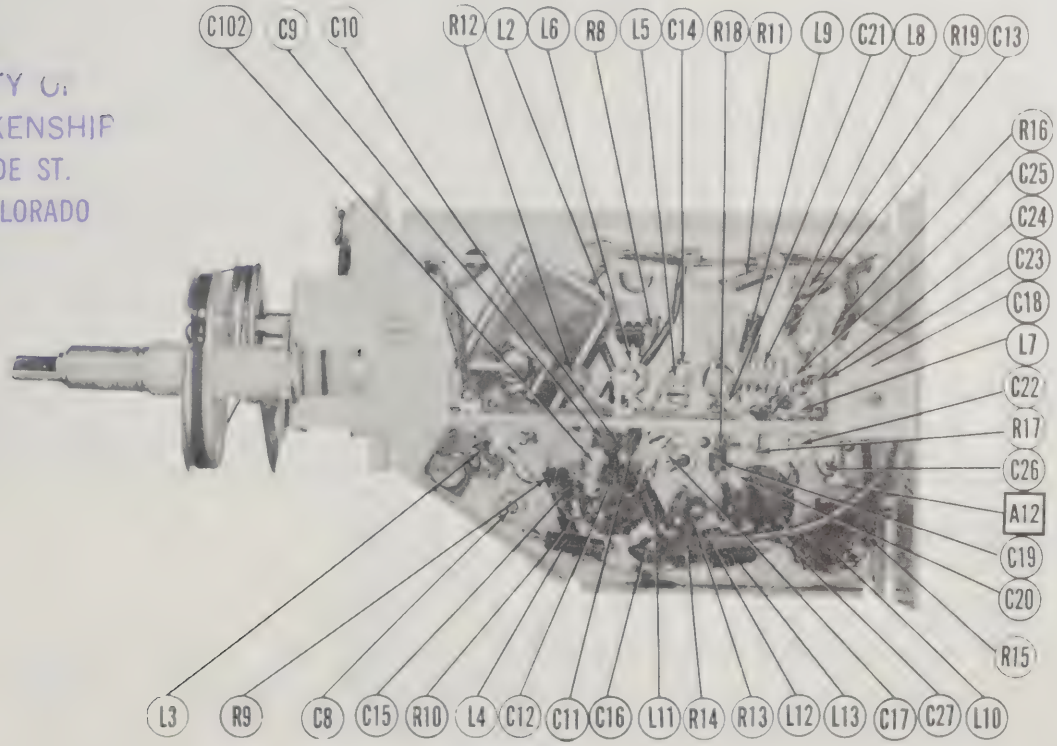


RF TUNER

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6CB6	-.4VDC	.6VDC	0V	6.3VAC	120VDC	125VDC	0V		
V 2	6J6	122VDC	95VDC	0V	6.3VAC	-2VDC	§-6.6VDC	0V		
V 3	6CB6	-.5VDC	.2VDC	6.3VAC	0V	120VDC	120VDC	0V		
V 4	6CB6	-.3VDC	.4VDC	6.3VAC	0V	115VDC	115VDC	0V		
V 5	6CB6	-.3VDC	.4VDC	6.3VAC	0V	110VDC	110VDC	0V		
V 6	6CB6	0V	1.4VDC	6.3VAC	0V	110VDC	110VDC	0V		
V 7	6AC7	0V	0V	0V	.8VDC	25VDC	120VDC	6.3VAC	220VDC	
V 8	6AU6	#3.8VDC	#11VDC	0V	6.3VAC	#125VDC	#125VDC	#11VDC		
V 9	6AL5	-.2VDC	-.2VDC	6.3VAC	0V	0V	0V	-.5VDC		
V 10	12AU7	25VDC	-.5VDC	0V	0V	0V	40VDC	-.7VDC	0V	6.3VAC
V 11	6BF5	#25VDC	#35VDC	0V	6.3VAC	#130VDC	#125VDC	#25VDC		
V 12	12AU7	35VDC	-.5VDC	0V	0V	0V	7.4VDC	0V	3.4VDC	6.3VAC
V 13	6C4	100VDC 5VDC	0V	6.3VAC	0V	100VDC 5VDC	-7.5VDC -1.5VDC	0V		
V 14	6SN7GT	-4.3VDC 0V	410VDC 280VDC	28VDC 0V	-4.3VDC 0V	410VDC 280VDC	28VDC 0V	0V	6.3VAC	
V 15	6SN7GT	-75VDC	250VDC	0V	-4VDC -3VDC	180VDC 120VDC	2VDC -9.5VDC	6.3VAC	0V	
V 16	6CD6G	50VAC	6.3VAC	38VDC	-.3VDC	-.3VDC	0V	0V	180VDC	TOP CAP *
V 17	6W4GT	0V	0V	475VDC	0V	280VDC	0V	475VDC	475VDC	
V 18	1B3GT	* DO NOT MEASURE								
V 19	5U4G	0V	300VDC	0V	300VAC	0V	300VAC	0V	300VDC	
V 20	16KP4	0V	100VDC 0V	PIN 10 475VDC	PIN 11 100VDC	PIN 12 6.3VAC				

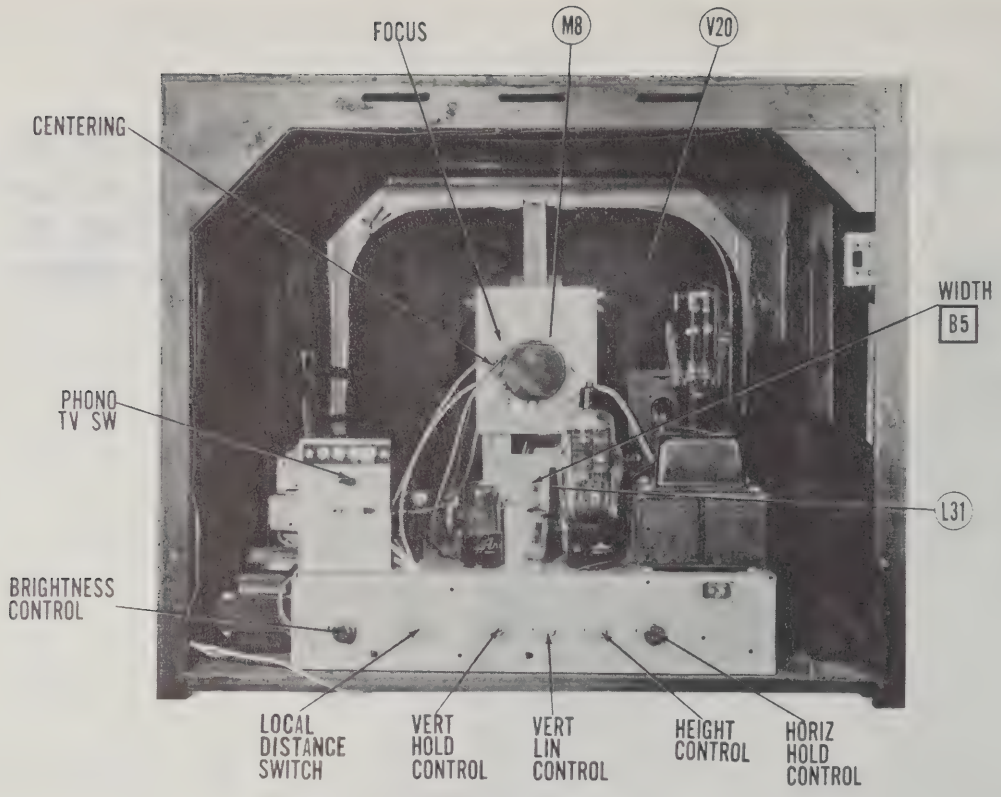
LOCAL - DISTANT SWITCH IN LOCAL POSITION
TV - PHONO SWITCH IN TV POSITION
§ TAKEN WITH VACUUM TUBE VOLTMETER
# MEASURED FROM JUNCTION OF R59, C1D, C6

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6CB6	160KΩ	68Ω	0Ω	.2Ω	#330Ω	#0Ω	0Ω		
V 2	6J6	#330Ω	#10KΩ	.1Ω	.2Ω	105KΩ	10KΩ	0Ω		
V 3	6CB6	160KΩ	47Ω	.1Ω	0Ω	#470Ω	#470Ω	0Ω		
V 4	6CB6	165KΩ	47Ω	.1Ω	0Ω	#620Ω	#620Ω	0Ω		
V 5	6CB6	165KΩ	47Ω	.1Ω	0Ω	#770Ω	#770Ω	0Ω		
V 6	6CB6	12KΩ	150Ω	.1Ω	0Ω	#770Ω	#770Ω	0Ω		
V 7	6AC7	0Ω	0Ω	0Ω	1Meg	2KΩ	#300Ω	.1Ω	†6.7KΩ	
V 8	6AU6	#100KΩ	#1.1KΩ	0Ω	.1Ω	†1.2KΩ	†1.2KΩ	#1.1KΩ		
V 9	6AL5	Inf.	Inf.	.1Ω	0Ω	0Ω	0Ω	18KΩ		
V 10	12AU7	†470KΩ	10Meg	0Ω	0Ω	0Ω	#16KΩ	1Meg	0Ω	.1Ω
V 11	6BF5	600KΩ	#470Ω	0Ω	.1Ω	† 465Ω	†2.8KΩ	600KΩ		
V 12	12AU7	#30KΩ	2.2Meg	0Ω	0Ω	0Ω	#38KΩ	0Ω	270KΩ	.1Ω
V 13	6C4	▲2.2Meg ▲3.5Meg.	Inf.	.1Ω	0Ω	▲2.2Meg ▲3.5Meg	1.6Meg 2.6Meg	0Ω		
V 14	6SN7GT	2.2Meg	▲10KΩ	3KΩ 0Ω	2.2Meg	▲10KΩ	3KΩ 0Ω	0Ω	.1Ω	
V 15	6SN7GT	300KΩ	▲90KΩ	0Ω	800KΩ	▲160KΩ ▲190KΩ	330KΩ	.1Ω	0Ω	
V 16	6CD6G	470KΩ	.1Ω	300Ω	470KΩ	470KΩ	Inf.	0Ω	†8.3KΩ	TOP CAP ▲40Ω
V 17	6W4GT	Inf.	Inf.	100KΩ	Inf.	† 70Ω	Inf.	▲.3Ω	▲ 0Ω	
V 18	1B3GT	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	TOP CAP ▲420Ω
V 19	5U4G	Inf.	50KΩ	Inf.	30Ω	Inf.	30Ω	Inf.	50KΩ	
V 20	16KP4	0Ω	35KΩ 0Ω	PIN 10 ▲100KΩ	PIN 11 270KΩ	PIN 12 .1Ω				

LOCAL-DISTANT SWITCH IN LOCAL POSITION
TV-PHONO SWITCH IN TV POSITION
MEASURED FROM JUNCTION OF R59, C1D, C6
† MEASURED FROM PIN 8 OF V 19
▲ MEASURED FROM PIN 3 OF V 17

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltage measured at 1,000 ohms.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. Front panels controls set at minimum.
6. Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.



CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably a test pattern.
Turn the horizontal hold control to the mid-position of its range.
Turn the horizontal lock trimmer (B3) to one turn out from fully clockwise.
Connect the vertical input lead of an oscilloscope to terminal C of L30.
Turn the horizontal waveform slug (B2) to maximum counter-clockwise and then three turns clockwise.
Adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally.
Adjust the waveform slug (B2) until the broad and narrow peaks of the waveform are of equal height as shown in figure 5. If necessary adjust B1 to keep the picture synchronized during adjustment of B2.
Remove the oscilloscope.
Turn the hold control to maximum clockwise and adjust B1 until the picture is out of sync. and shows one vertical or diagonal bar in the picture.
Turn the hold control to maximum counter-clockwise.
If the picture does not fall out of sync, momentarily interrupt the signal by switching to another channel and back again.
Turn the hold control slowly clockwise and carefully note the least number of bars present just before the picture synchronizes. There should be 2 bars, if not adjust B3 and repeat the check until 2 bars are present at the pull in point.

HORIZONTAL DRIVE AND WIDTH ADJUSTMENT
Turn the horizontal drive trimmer (B4) two turns counter-clockwise from maximum clockwise.
Adjust the width slug (B5) until the picture fills the mask horizontally.

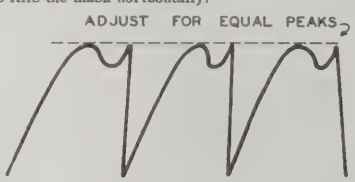
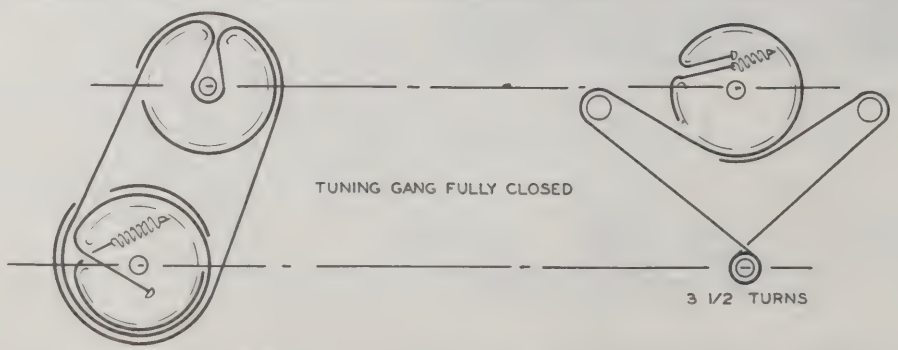


FIG. 5



DRIVE CORD STRINGING

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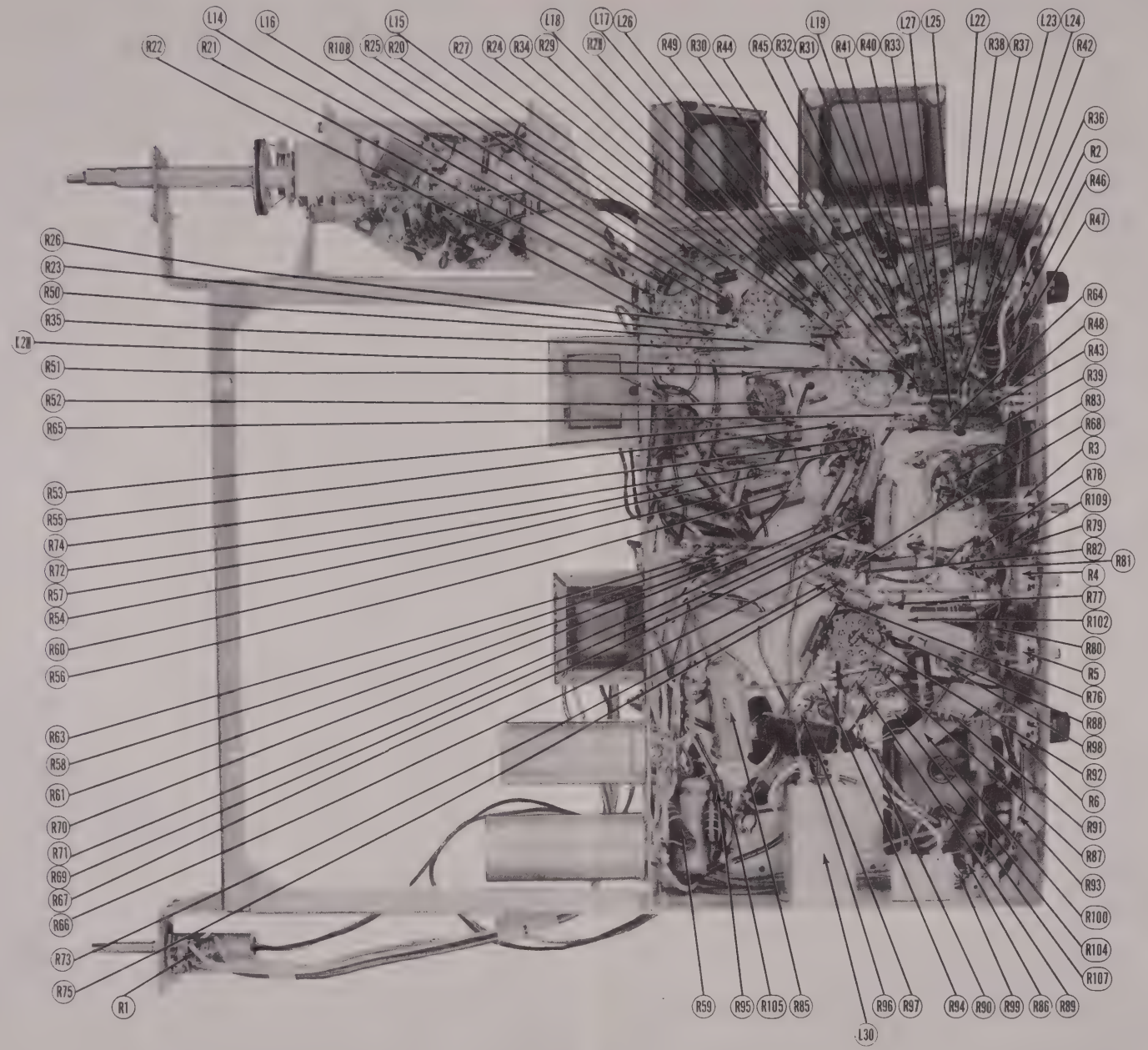
DENVER, COLORADO



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: SILVERTONE PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	NOTES
V1	RF Amplifier	6CB6	6CB6	6CK	
V2	Converter	6J6	6J6	7BF	
V3	1st Video IF Amp.	6CB6	6CB6	6CK	
V4	2nd Video IF Amp.	6CB6	6CB6	6CK	
V5	3rd Video IF Amp.	6CB6	6CB6	6CK	
V6A	4th Video IF Amp.	6CB6	6CB6	6CK	
B	4th Video IF Amp.	6BC5	6BC5	7BD	
V7	Video Amp.	6AC7	6AC7	8N	
V8	Sound IF Amp.	6AU6	6AU6	7BK	
V9	Ratio Det.	6AL5	6AL5	6BT	
V10	AF Amp. - Sync. Clipper	12AU7	12AU7	9A	
V11	Audio Output	6BF5	6BF5	7BZ	
V12	Sync. Sep. -Sync. Amp.	12AU7	12AU7	9A	
V13	Vert. Osc.	6C4	6C4	5BG	
V14	Vert. Amp.	6SN7GT	6SN7GT	8BD	
V15	Hor. AFC-Hor. Osc.	6SN7GT	6SN7GT	8BD	
V16	Horiz. Output	6CD6G	6CD6G	5BT	
V17	Damper	6W4GT	6W4GT	4CG	
V18	B.V. Rectifier	1B3GT	1B3GT	3C	
V19	L.V. Rectifier	5U4G	5U4G	5T	
V20A	Picture Tube	16KP4	16KP4	12D	
B	Picture Tube	16KP4A	16KP4A	12D	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: SILVERTONE PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1A	40	400	N 22422-11	AFH861162E				TVL-3764	▲ Filter
B	30	400						TVA-1504	■ Filter
C	80	200							▲ Output Cath. Decoupling
D	10	200							
C2A	10	450	N 22422-10	AF882J		UPT403		TVL-3785	▲ Decoupling
B	40	400		PRS50/100				TVA-1310	■ Decoupling
C	40	400							▲ Filter
D	100	50							Vert. Output Cath.
C3	4	300	N 23714	PRS350/4		BR435		TVA-1601	Output Screen
C4	5	150	N 23025-2	PRS150/4		BR415		TVA-1402	Stabilizing Cap
C5	5	150	N 23025-2	PRS150/4		BR415		TVA-1402	AGC Filter
C6	4	300	N 23714						Decoupling
C7	5	150	N 23025-2						AF Amp. Cath. †
C8	1-6		N 23106-3		829-6				Variable Trimmer
C9	1000			BPD-001	DD-102		801-001	19C1	AGC Filter
C10	1000			BPD-001	DD-102		801-001	19C1	RF Amp. Plate Dec.
C11	1000			BPD-001	DD-102		801-001	19C1	RF Amp. Plate Dec.
C12	1000			BPD-001	DD-102		801-001	19C1	RF Bypass
C13	1000			BPD-001	DD-102		801-001	19C1	RF Bypass
C14	13						NPOK-13		Fixed Padder
C15	1000			BPD-001	DD-102		801-001	19C1	RF Amp. Cath.
C16	1000			BPD-001	DD-102		801-001		Filament Bypass
C17	14						NPOK-14		RF Coupling
C18	1000			BPD-001	DD-102		801-001	19C1	Conv. Plate Dec.
C19	3.3			SI3.3NPO	TCZ-3.3		NPOK-3.3		Osc. Coupling
C20	33			SI33	D6-33		GP1K-33	19C24	Osc. Grid Cap
C21	8.2			SI8.2NPO			NPOK-8.2		Fixed Trimmer
C22	14						NPOK-14		Fixed Trimmer
C23	1-6		N 23106-3		829-6				Variable Trimmer
C24	82			SI82	D6-820		GP1K-82		Fixed Padder
C25	18				TCZ-18		NPOK-18		Fixed Padder
C26	3-3		N 23106-1		829-3				Variable Trimmer
C27	5						N220K-5		Fixed Trimmer *
C28	1000			BPD-001	DD-102		801-001	19C1	AGC Filter
C29	1000			BPD-001	DD-102		801-001	19C1	AGC Filter
C30	100			SI100	D6-101		GP1K-100	19C11	IFCoupling
C31	1000			BPD-001	DD-102	1W5D1	801-001	19C1	AGC Filter
C32	1000			BPD-001	DD-102	1W5D1	801-001	19C1	RF Bypass
C33	610			SI680	D6-681	1W5T7	GP2K-680	19C17	1st V. IF Dec.
C34	1000			BPD-001	DD-102	1W5D1	801-001	19C1	1st V. IF Fil.
C35	39						N330K-39		Fixed Trimmer
C36	47			SI47	D6-470	5W5Q5	GP1K-47	19C25	IF Coupling
C37	1000			BPD-001	DD-102	1W5D1	801-001	19C1	AGC Filter
C38	1000			BPD 001	DD-102	1W5D1	801-001	19C1	RF Bypass
C39	610			SI680	D6-681	1W5T7	GP2K-680	19C17	2nd V. IF Dec.
C40	1000			BPD-001	DD-102	1W5D1	801-001	19C1	2nd V. IF Fil.
C41	39						N330K-39		Fixed Trimmer
C42	22			SI22	D6-220	5W5Q25	GP1K-22	19C23	IF Coupling
C43	1000			BPD-001	DD-102	1W5D1	801-001	19C1	AGC Filter
C44	1000			BPD-001	DD-102	1W5D1	801-001	19C1	AGC Filter
C45	1000			BPD-001	DD-102	1W5D1	801-001	19C1	RF Bypass
C46	610			SI680	D6-681	1W5T7	GP2K-680	19C17	3rd V. IF Dec.
C47	1000			BPD-001	DD-102	1W5D1	801-001	19C1	3rd V. IF Fil.
C48	47			SI47	D6-470	5W5Q5	GP1K-47	19C25	IF Coupling
C49	610			SI680	D6-681	1W5T7	GP2K-680	19C17	4th V. IF Dec.
C50	1000			BPD-001	DD-102	1W5D1	801-001	19C1	4th V. IF Cath.
C51	1000			BPD-001	DD-102	1W5D1	801-001	19C1	4th V. IF Fil.
C52	7			SI6.8NPO	TCZ-6.8	5W5Q1	NPOK-6.8		IF Coupling
C53	100			SI100	D6-101	5W5T1	GP1K-100	19C11	IF Coupling
C54	1000			BPD-001	DD-102	1W5D1	801-001	19C1	DAGC Dec.
C55	5			SI5NPO	TCZ-4.7	5R5V5	NPOK-5	MS-55	V. Det. Filter
C56	.1	200		P288-1	DF-104	PTE4P1		2TM-P1	Video Coupling
C57	5			SI5	TCZ-4.7	5W5V5	NPOK-5	MS-55	V. Amp. Grid
C58	.1	400		P488-1	DF-104	PTE4P1		4TM-P1	Video Coupling
C59	.047	600		P688-047	DF-503	PTE6S5		6TM-S47	Pic. Tube Grid
C60	.047	600		P688-047	DF-503	PTE6S5		6TM-S47	Accel. Anode
C61	2.2				TCZ-2.2				S. IF Coupling
C62	68						N220K-68		Fixed Trimmer
C63	33			SI33	D6-330	5W5Q4	GP1K-33	19C24	S. IF Coupling
C64	5000			BPD-005	DD-502	1D5D5	811-005	29C1	S. IF Cath.
C65	5000			BPD-005	DD-502	1D5D5	811-005	29C1	S. IF Dec.
C66	5						N220K-5		Fixed Trimmer
C67	330	500		SI330	D6-331	5W5T3	GP2K-330	19C14	Diode Load Cap

CAPACITORS (CONT.)

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: SILVERTONE PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C68	.0022	600		P688-0022	D6-222	PTE6D2	GP2M-0022	6TM-D22	De-emphasis
C69	.0047	600		P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Audio Coupling
C70	.01	600		P688-01	D6-103	PTE6S1	821-01	6TM-S1	Audio Coupling
C71	.022	400		P488-022	DF-203	PTE4S2		4TM-S22	Audio Coupling
C72	.22	200		P488-22		GT2P25		2TM-P22	Bias Filter
C73	.01	600		P688-01	D6-103	PTE6S1	821-01	6TM-S1	Output Plate
C74	270			SI270	D6-271	5W5T25	GP2K-270	19C31	Sync. Coupling
C75	.01	600		P688-01	D6-103	PTE6S1	821-01	6TM-S1	Sync. Coupling
C76	.1	400		P488-1	DF-104	PTE4P1		4TM-P1	Sync. Coupling
C77	.01	600		P688-01	D6-103	PTE6S1	821-01	6TM-S1	Sync. Coupling
C78	.0022	600		P688-0022	D6-222	PTE6D2	GP2M-0022	6TM-D22	Integrator Net
C79	.0047	600		P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Integrator Net
C80	.0047	600		P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Integrator Net
C81	.0047	600		P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Vert. Osc. Grid
C82	.047	600		P688-047		PTE6S5		6TM-S47	Vert. Discharge
C83	.1	600		P688-1	DF-104	PTE6P1		6TM-P1	Vert. Sweep Coupling
C84	39	500		1468-00004	D6-390	5W5Q4	GP1K-39	1FM-44	Hor. Sync. Coupling
C85	.0022	600		P688-0022	D6-222	PTE6D2	GP2M-0022	6TM-D22	Hor. Sync. Coupling
C86	.022	400		P488-022	DF-203	PTE4S2		4TM-S22	AFC Filter
C87	.22	200		P488-22		GT2P25		2TM-P22	AFC Filter
C88	180	1000							Hor. Osc. Grid
C89	.01	600		P688-01		PTE6S1		6TM-S1	Fixed Trimmer
C90	.0015	600		P688-0015	D6-152	1W5D15	GP2L-0015	6TM-D15	Hor. Discharge
C91	560	500		SI560	D6-561	5W5T5	GP2K-560	1FM-35	Hor. Sweep Coupling
C92	.047	600		P688-047	DF-503	PTE6S5		6TM-S47	Hor. Output Screen
C93	560	500		SI560	D6-561	5W5T5	GP2K-560	1FM-35	Hor. Output Screen
C94	.22	400		P488-22		GT4P25		4TM-P22	Hor. Output Cath.
C95	.1	1000		1084-1		GT6P1			Damper Filter
C96	.47	200		P288-47		GT2P5		2TM-P47	Hor. Sweep Coupling
C97	.047	600		P688-047	DF-503	PTE6S5		6TM-S47	Hor. AFC Plate
C98	390	500		1468-0004	D6-391	5W5T4	GP2K-390	1FM-34	AFC Filter
C99	1000			BPD-001	DD-102	1W5D1	801-001	19C1	Filament Bypass
C100	.01	600		P688-01	D6-103	PTE6S1	821-01	6TM-S1	Line Filter
C101	.01	600		P688-01	D6-103	PTE6S1	821-01	6TM-S1	Line Filter
C102	47			SI47	D6-470		GP1K-47	19C25	RF Coupling
C103	.1	600		P688-1	DF-104	PTE6P1		6TM-P1	Decoupling †

* Some Models Use 14MMF In This Application.
† Used In Late Production Models.

CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: SILVERTONE PART No.	IRC PART No.	CENTRALAB PART No.	INSTALLATION NOTES
R1	Filter			Concentrikit		
A	2000Ω	½		B17-110 *		Contrast Control - Front
B	1Meg			B13-137 *	SBB-657-S	Volume Control And SW - Rear
C	Shaft End		N-22464-21	E-187 *	RTV-198	Attach Per Instructions In "Concentrikit"
D	Switch			76-1 *		Attach Per Instructions In "Concentrikit"
R2A	50KΩ	½	N-22464-25	Q11-123	AG-44-S	AN-31	Brightness Control
B	Shaft		Not req.	Not req.	KS8-3	AK-4	Attach to R2A Per Instructions
R3A	1Meg	½	N-22464-24	Q11-137	AG-61-S	AN-69	Vertical Hold Control
B	Shaft		Not req.	Not req.	KS8-3	AK-4	Attach To R3A Per Instructions
R4A	3000Ω	½	N-22464-26	Q11-112	AG-15-S	AN-7	Vertical Linearity Control
B	Shaft		Not req.	Not req.	FK5-1/4	AK-1	Attach to R4A Per Instructions
R5A	2.5Meg	½	N-22464-10	Q11-239	AG-84-S	AN-83	Height Control
B	Shaft		Not req.	Not req.	FK5-1/4	AK-1	Attach to R5A Per Instructions
R6A	50KΩ	½	N-22464-25	Q11-123	AG-44-S	AN-31	Horizontal Hold Control
B	Shaft		Not req.	Not req.	KS8-3	AK-4	Attach to R6A Per Instructions

* Additional Parts To Be Used In "Concentrikit".

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: SILVERTONE PART No.	IRC PART No.	IDENTIFICATION CODES
R7	100Ω 20%	1		BTS-100	Antenna Loading
R8	3300Ω	½		BTS-3300	AGC Network
R9	560Ω 20%	½		BTS-560	RF Amp. Grid
R10	68Ω 20%	½			RF Amp. Cathode
R11	330Ω 20%	½		BTS-330	RF Amp. Plate
R12	3.9Ω	1			Parasitic Suppressor - See Note 1
R13	5600Ω	½			Converter Grid
R14	100KΩ 20%	½			Converter Grid
R15	10KΩ	½			Converter Plate
R16	330Ω 20%	½		BTS-330	Converter Plate Decoupling
R17	22KΩ	½			Osc. Coil Shunt
R18	10KΩ	½			Osc. Grid
R19	330 20%	½		BTS-330	Osc. Plate
R20	3300Ω 20%	½		BTS-3300	AGC Network
R21	8200Ω	½			1st Video IF Amp. Grid
R22	47Ω	½			1st Video IF Amp. Cathode
R23	470Ω 20%	½		BTS-470	1st Video IF Amp. Decoupling
R24	3300Ω 20%	½		BTS-3300	AGC Network
R25	18KΩ 5%	½			2nd Video IF Amp. Grid
R26	47Ω	½			2nd Video IF Amp. Cathode
R27	470Ω 20%	½		BTS-470	2nd Video IF Amp. Decoupling
R28	18KΩ 5%	½			3rd Video IF Amp. Grid
R29	47Ω	½			3rd Video IF Amp. Cathode
R30	470Ω 20%	½		BTS-470	3rd Video IF Amp. Decoupling
R31	12KΩ 5%	½			4th Video IF Amp. Grid
R32	150Ω	½		BTS-150	4th Video IF Amp. Cathode
R33	470Ω 20%	½		BTS-470	4th Video IF Amp. Decoupling
R34	150Ω	½		BTS-150	Decoupling
R35	150Ω	½		BTS-150	Decoupling
R36	6800Ω	½		BTS-6800	Video Det. Diode Load
R37	220KΩ	½		BTS-220K	AGC Load
R38	56KΩ	½		BTS-56K	AGC Network
R39	3300Ω	½		BTS-3300	AGC Network
R40	1Meg 20%	½		BTS-1Meg	Video Amp. Grid
R41	68Ω	½			Video Amp. Cathode
R42	5600Ω	½		BTA-5600	Video Amp. Plate - See Note 8
R43	470KΩ	½		BTS-470K	Voltage Divider
R44	100KΩ	½		BTS-1000	Voltage Divider
R45	220KΩ	½		BTS-220K	Voltage Divider
R46	22KΩ	½		BTS-22K	Voltage Divider - See Note 7
R47	47KΩ	½		BTS-47K	Voltage Divider - See Note 7
R48	470KΩ	½		BTS-470K	Picture Tube Cathode

RESISTORS (CONT.)

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: SILVERTONE PART No.	IRC PART No.	IDENTIFICATION CODES
R49	100KΩ	½			Sound IF Amp. Grid Leak
R50	1000Ω	½		BTS-1000	Sound IF Amp. Cathode
R51	1000Ω	½		BTS-1000	Sound IF Amp. Decoupling
R52	18KΩ	½		BTS-18K	Ratio Det. Diode Load
R53	47Ω	½		BW-½-47	Balancing
R54	27KΩ	½		BTS-27K	De-emphasis
R55	10Meg	½		BTS-10Meg	AF Amp. Grid - See Note 9
R56	470KΩ	½		BTS-470K	AF Amp. Plate
R57	470KΩ	½		BTS-470K	Output Grid
R58	180KΩ 5%	½		BTS-180K-5%	Output Grid
R59	470Ω	2		BTB-470	Output Cathode
R60	2500Ω	2			Output Screen - See Note 2
C61	220Ω	2		BW-2-220	Output Decoupling
C62	3300Ω	½		BTS-3300	AF Amp. Cathode
R63	160KΩ 5%	½			Boltage Divider
R64	10KΩ 20%	½		BTS-10K	Isolation - See Note 12
R65	270KΩ	½		BTS-270K	Isolation
R66	2.2Meg	½		BTS-2.2Meg	Sync. Sep. Grid
R67	47KΩ 20%	½		BTS-47K	Sync. Sep. Plate
R68	47KΩ 20%	½		BTS-47K	Voltage Divider
R69	270KΩ	½		BTS-270K	Sync. Amp. Cathode
R70	270KΩ	½		BTS-270K	Sync. Amp. Plate
R71	18KΩ 5%	½		BTS-18K-5%	Voltage Divider - See Note 3
R72	1Meg 20%	½		BTS-1Meg	Sync. Clipper Grid
R73	22KΩ	1		BTA-22K	Sync. Clipper Plate
R74	18KΩ 5%	½		BTS-18K-5%	Voltage Divider - See Note 3
R75	22KΩ	½		BTS-22K	Integrator
R76	8200Ω	½		BTS-8200	Integrator
R77	8200Ω	½		BTS-8200	Integrator
R78	1.5Meg	½		BTS-1.5Meg	Vert. Osc. Grid - See Note 4
R79	100KΩ	½		BTS-100K	Vert. Osc. Grid
R80	2.7Meg	½		BTS-2.7Meg	Vert. Osc. Plate - See Note 5
R81	2.2Meg	½		BTS-2.2Meg	Vert. Osc. Transformer Shunt
R82	1500Ω 5%	½		BTS-1500-5%	Vert. Peaking
R83	2.2Meg	½		BTS-2.2Meg	Vert. Amp. Grid
R84	820Ω	½		BTS-820	Vert. Amp. Cathode - See Note 6
R85	8200Ω	10		1 3/4A-8000	Decoupling - Wire Wound - See Note 10 and 14
R86	470KΩ	½		BTS-470K	Voltage Divider
R87	8200Ω	½		BTS-8200	Horizontal AFC Filter
R88	820KΩ 5%	½		BTS-820K-5%	Horizontal AFC Grid
R89	150KΩ	½		BTS-150K	Horizontal AFC Cathode
R90	180KΩ 5%	½		BTS-180K-5%	Horizontal AFC Cathode
R91	180KΩ 5%	½		BTA-180K-5%	Horizontal AFC Plate
R92	2.7Meg 5%	½		BTS-2.7Meg-5%	Voltage Divider
R93	100KΩ	½		BTS-100K	Voltage Divider
R94	120KΩ	1		BTA-120K	Horizontal Osc. Grid
R95	91KΩ 5%	1			Horizontal Osc. Plate
R96	8200Ω	½		BTS-8200	Horizontal Osc. Transformer Shunt
R97	470KΩ	½		BTS-470K	Horizontal Feedback
R98	47Ω	½			Parasitic Suppressor
R99	470KΩ	½		BTS-470K	Horizontal Output Grid
R100	300Ω	10		1 3/4A-300	Horizontal Output Cathode - Wire Wound
R101	3300Ω	½		BTS-3300	Horizontal Output Cathode - See Note 6
R102	8200Ω	10		1 3/4A-8000	Horizontal Output Screen - Wire Wound
R103	3.3Ω				HV Rectifier Filament
R104	100KΩ 20%	½		BTS-100K	ACC Anode Load
R105	1000Ω 20%	½		BTS-1000	Decoupling - See Note 8.
R106	100Ω	½		BTS-100	Decoupling - See Note 13
R107	470KΩ	½		BTS-470K	Isolation
R108	27KΩ 5%	½			2nd Video IF Trap Coil Shunt
R109	10Meg	½		BTS-10Meg	Voltage Divider

Note 1. Some Models Use 4.7Ω Resistor In This Application.
Note 2. Some Models Use 2200Ω Resistor In This Application.
Note 3. Some Models Use 15KΩ Resistor In This Application.
Note 4. Some Models Use 1.2Meg Resistor In This Application.
Note 5. Some Models Use 2.2Meg Resistor In This Application.
Note 6. Not Used In All Models.
Note 7. Some Models Use 68KΩ Resistor In Place Of R46 And R47.
Note 8. Late Production Models Use 2200Ω Resistor In This Application.
Note 9. Late Production Models Use 470KΩ Resistor In This Application.
Note 10. Late Production Models Use 6800Ω Resistor In This Application.
Note 12. Late Production Models Use 3300Ω 2 Watt Resistor In This Application.
Note 13. Used Only In Late Production Models.
Note 14. Some Models 12KΩ Resistor In This Application.

TRANSFORMER (POWER)

ITEM No.	RATING: PRI.	RATING: SEC. 1	RATING: SEC. 2	RATING: SEC. 3	REPLACEMENT DATA: SILVERTONE PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC	620VCT	5V	6.3V	N23837			
	①1.23A	.250ADC	④ 3A	⑤1.2A				
T2	117VAC	6.3V			N23840			
	②.57A	③8.6A						

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING: DC RESISTANCE PRI.	RATING: DC RESISTANCE SEC.	REPLACEMENT DATA: SILVERTONE PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	NOTES
T3	192Ω	1050Ω	N-22446-2	A-8112 ①	A-4000 ①	TB0-3 ①	Vert. Block Osc.
T4	420Ω	23Ω Tap 18Ω	N-23802-1		HV0-6		Horiz. Output
	Tap 41Ω	SEC. 2 0Ω					
T5	1.1KΩ Tap 10Ω		N-23657		A-3037		Vert. Output
T6A	28Ω		N -23816-2				Horiz. Deflection Coil
B	46Ω		N -24292 ⑤				Vert. Deflection Coil

① Drill new mounting hole.
⑤ Used in some models.

PARTS LIST CONTINUED ON PAGE 15

SILVERTONE MODELS 179-16, 180-16, 194-16, 195-16 (Ch. 132.890)

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		SILVERTONE PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T7	2.2KΩ	4.3Ω	200Ω	.8Ω	N23490-1	A-3825	A-3018 ①	R0-2 ①	① Drill new mounting hole.

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
	FIELD RES.	V. C. IMP.	SILVERTONE PART No.	VIKING PART No.	QUAM PART No.	
SP1A	PM	4.3Ω	N23609 ②	8J9	8A31	② Used in Models 179, 180
B	PM	4.3Ω	N23937 ③	69J9	69A2	③ Used in Models 194, 195
	CONE DIA.	V. C. DIA.				
SP2A	8"	9/16"				
B	6"X 9"	9/16"				

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 ∿)	SILVERTONE PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L1	.250ADC	43Ω	1.2 Henries	N22561-2	C2326	C-2991	TR3300 ①	① Drill new mtg. hole

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	SILVERTONE PART No.	MEISSNER PART No.	
L2	Ant. Trans.	0Ω	0Ω			High-Band (Part of Tuner Part # AE23054-3)
L3	Ant. Trans.	.1Ω	.1Ω	N23112		Low-Band (Part of Tuner Part # AE23054-3)
L4	Grid Choke	.5Ω		N23502-1		Part of Tuner Part # AE23054-3
L5	RF Coil	0Ω				High-Band (Part of Tuner Part # AE23054-3)
L6	RF Coil	0Ω				Low-Band (Part of Tuner Part # AE23054-3)
L7	Osc. Coil	0Ω				High-Band (Part of Tuner Part # AE23054-3)
L8	Osc. Coil	0Ω				Low-Band (Part of Tuner Part # AE23054-3)
L9	RF Choke	.5Ω		N23502-1		Part of Tuner Part # AE23054-3
L10	1st Video IF	.1Ω				Part of Tuner Part # AE23054-3
L11	Fil. Choke	.1Ω		N22334-1		Part of Tuner Part # AE23054-3
L12	Fil. Choke	.1Ω		N22334-1		Part of Tuner Part # AE23054-3
L13	Fil. Choke	.1Ω		N22334-1		Part of Tuner Part # AE23054-3
L14	Fil. Choke	0Ω		N 23095		
L15	Fil. Choke	0Ω		N 23095		
L16	2nd Video IF	.1Ω		N 23614		Includes Trap
L17	Fil. Choke	0Ω		N 23095		
L18	3rd Video IF	.1Ω		N 23672		Includes Trap
L19	Fil. Choke	0Ω		N 23095		
L20	4th Video IF	.1Ω		N23673-1		
L21	5th Video IF	.1Ω		N23673-2		
L22	Peaking	1.6Ω		N 22500-6		20 Microhenries (Yellow Dot)
L23	Peaking	8.4Ω		N 22500-9		250 Microhenries (Violet Dot-Wound on 47KΩ Resistor)
L24	Peaking	7.9Ω		N 22500-3		250 Microhenries (Green Dot)
L25	Peaking	.9Ω		N 22500-10		4.5 Microhenries (Approximately)
L26	Peaking	9.5Ω		N 22500-11		300 Microhenries (Yellow Dot-Wound on 33KΩ Resistor)
L27	Peaking	11Ω		N 22500-12		450 Microhenries (Blue Dot)
L28	Sound IF	1.1Ω		N 23093		
L29	Ratio Det. Trans.	5.8Ω	2.1Ω	N 23094		
L30	Horiz. Osc. Coil	138Ω	40Ω	N 22563		
L31	Width Coil	5.2Ω		N 23894		

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				REMARKS
			SILVERTONE PART No.		LITTELFUSE PART No.		
			FUSE	HOLDER	FUSE	HOLDER	
M1	3AG	1/4A	N-22493		318.250		

MISCELLANEOUS

ITEM No.	PART NAME	SILVERTONE PART No.	NOTES
M2	RF Tuner	N23054-3	
M3	Crystal	N 23261	Video Det. -(1N-64)
M4	Crystal	N 23261	AGC Rectifier -(1N-64)
M5	Switch	N 23245	TV-Phono
M6	Switch	N 24242	Local-Distant
M7	Switch	N22868	Power Interlock
M8	Ion Trap	N 24119-1	
M9	Focus Magnet	N 23910-1	
B3, B4	Trimmer	N 23130-2	Dual (Horiz. Lock 3-35MMF), (Horiz, Drive 10-160MMF)
	Safety Glass	N 23775	
	Knob	N24046-2	Band Change Assembly (Model 179)
	Knob	N24046-1	Band Change Assembly (Models 180, 194, 195)
	Knob	N24049-2	Channel Selector (Model 179)
	Knob	N24049-1	Channel Selector (Models 180, 194, 195)
	Knob	N24050-2	Volume (Model 179)
	Knob	N24050-1	Volume (Models 180, 194, 195)
	Knob	N22686-1	Vertical Hold
	Knob	N22686-2	Horizontal Hold
	Knob	N22686-3	Brightness

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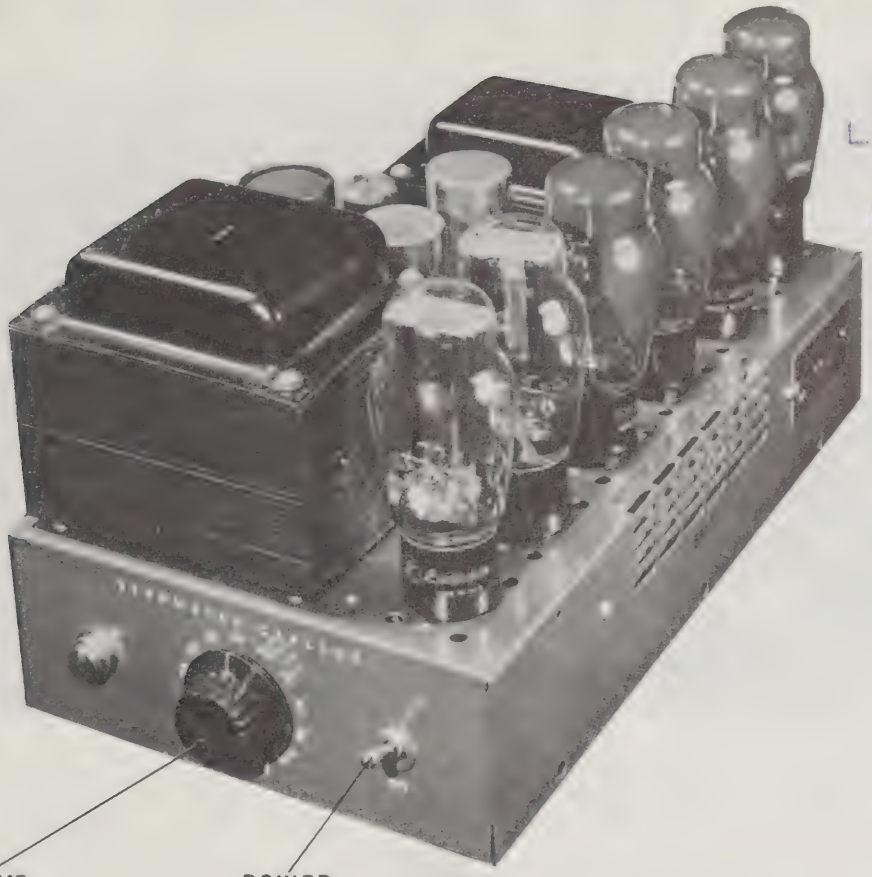
STROMBERG-CARLSON
MODEL AP-50



STROMBERG-CARLSON
MODEL AP-50

TRADE NAME	Stromberg-Carlson, Model AP-50
MANUFACTURER	Stromberg-Carlson Co., 100 Carlson Rd., Rochester, New York
TYPE SET	AC Operated Audio Amplifier
TUBES (EIGHT)	Types 6SN7GT 1st & 2nd AF Amp., 6N7 3rd AF - Phase Inverter, (4) 6L6G Power Output, (2) 5U4G Rectifier
POWER SUPPLY	105-125 Volts AC RATING 2.18 Amp. @ 117 Volts AC

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PARTS LIST AND DESCRIPTIONS

STROMBERG-CARLSON
MODEL AP-50

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: STROM-CARLSON PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	INSTALLATION NOTES
V1	1st & 2nd AF Amp.	6SN7GT	6SN7GT	8BD	
V2	3rd AF Amp.-Phase Inverter	6N7	6N7	8B	
V3	Power Output	6L6G	6L6G	7AC	
V4	Power Output	6L6G	6L6G	7AC	
V5	Power Output	6L6G	6L6G	7AC	
V6	Power Output	6L6G	6L6G	7AC	
V7	Rectifier	5U4G	5U4G	5T	
V8	Rectifer	5U4G	5U4G	5T	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1A	30	500	46320	AF88K		UP4450		R1069	▲ Filter
B	30	500							▲ Filter
C2	15	525	46164			KR616X		R1081	Filter
C3A	30	450	34050	AF3662J		UP3345		TVL-4769	● Filter
B	30	450				UP15D35			■ Filter
C	15	350							▲ Decoupling
D	15	250							Decoupling
C4	25	50	46049	PRS50/25		BR255A		TVA-1306	1st AF Amp. Cathode
C5	25	50	46049	PRS50/25		BR255A		TVA-1306	Bias Filter
C6	.022	400	110542	P488-022	DF-203	PTE4S2		4TM-S22	Audio Coupling
C7	.022	400	110542	P488-022	DF-203	PTE4S2		4TM-S22	Tone Comp.
C8	.1	400	110546	P488-1	DF-104	PTE4P1		4TM-P1	Audio Coupling
C9	.022	400	110542	P488-022	DF-203	PTE4S2		4TM-S22	Audio Coupling
C10	.1	400	110546	P488-1	DF-104	PTE4P1		4TM-P1	Audio Coupling
C11	.1	400	110546	P488-1	DF-104	PTE4P1		4TM-P1	Audio Coupling
C12	.022	1000	110542	P1088-022		PTE16S2		MB-S22	Fixed Trimmer

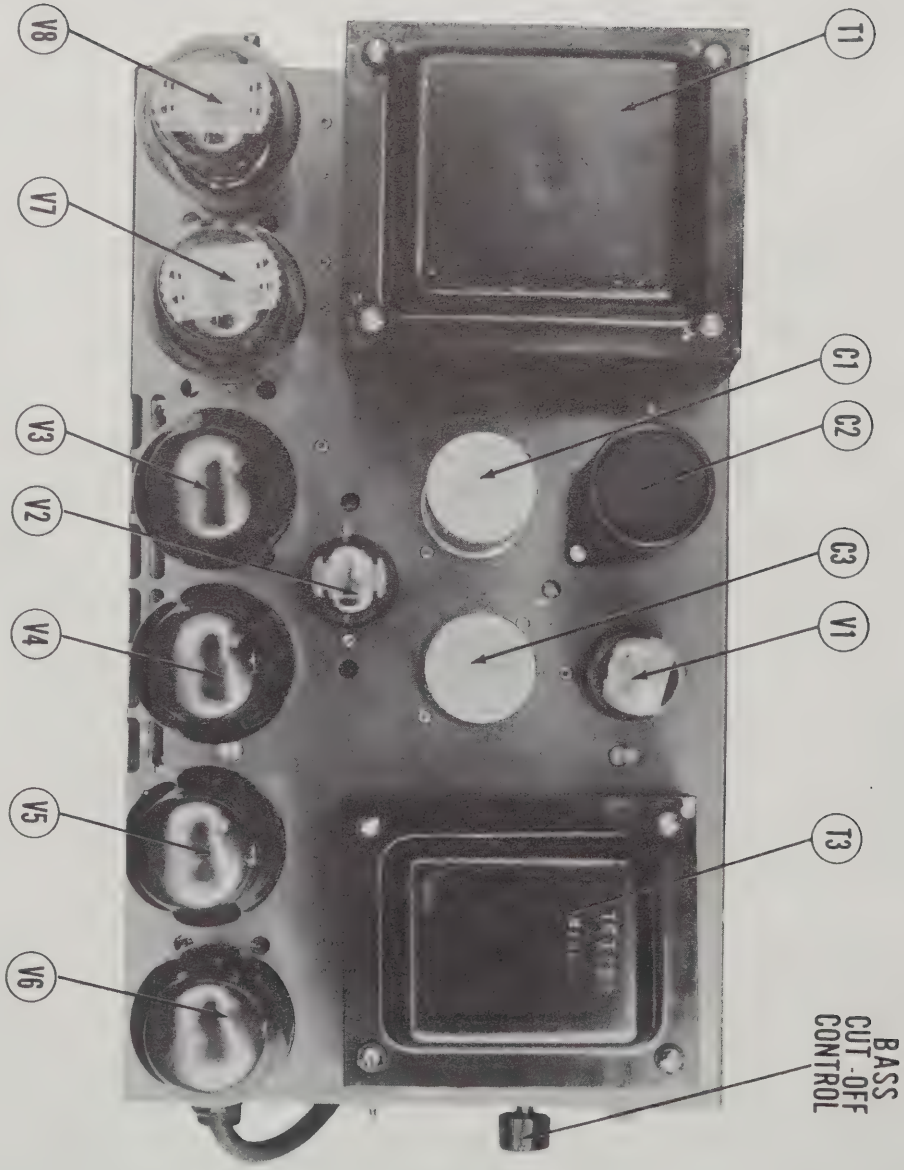
CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: Strom-Carlson PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	INSTALLATION NOTES
R1A	250KΩ	½	45745	Q13-130	AG-64-Z	B-51	Volume Control
B	Shaft		Not Req	Not Req	FS-3	Not Req	Attach to R1A per instructions
R2A	1Meg	½	145607	Q13-137	DC-11-Z		Bass Cut-Off control
B	1Meg	½		M13-137	Not Req		Attach to R2A per instructions

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: STROM-CARL PART No.	IRC PART No.	IDENTIFICATION CODES
R3	470Ω	½	28154	BTS-470	1st AF Amp. Cathode
R4	2200Ω	½	28162	BTS-2200	1st AF Amp. Plate
R5	10KΩ	½	28170	BTS-10K	Voltage Divider
R6	220KΩ	½	28183	BTS-220K	Voltage Divider
R7	47KΩ	½	28177	BTS-47K	Tone Compensation
R8	47KΩ	½	28177	BTS-47K	2nd AF Amp. Grid
R9	330Ω	½	28152	BTS-330	2nd AF Amp. Cathode
R10	4700Ω	½	28166	BTS-4700	2nd AF Amp. Plate
R11	150KΩ	½	27640	BTS-150X-5%	Isolation
R12	2200Ω	½	28162	BTS-3300	3rd AF Amp. Cathode
R13	47KΩ	½	28177	BTS-47K	3rd AF Amp. Plate
R14	470KΩ	½	28187	BTS-470K	Isolation
R15	22KΩ	½	27407	BTS-22K	Phase Inv. Grid
R16	47KΩ	½	28177	BTS-47K	Phase Inv. Plate
R17	10KΩ	½	28170	BTS-10K	Output Grid
R18	10KΩ	½	28170	BTS-10K	Output Grid
R19	10KΩ	½	28170	BTS-10K	Output Grid
R20	10KΩ	½	28170	BTS-10K	Output Grid
R21	100KΩ	½	28006	BTS-100K	Output Grid
R22	100KΩ	½	28006	BTS-100K	Output Grid

CHASSIS—TOP VIEW



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PARTS LIST AND DESCRIPTIONS (Continued)

R23	200Ω	½			Output Screen - See Note
R24	200Ω	½			Output Screen - See Note
R25A	1200Ω				Output Screen Decoupling - Wire Wound
B	5000Ω	65	149609		Voltage Divider - Wire Wound
C	100Ω				Bias Network - Wire Wound
R26	1Meg	½	28191	BTS-1Meg	Feedback
R27	15KΩ	2	149056	BTA-15K	Filter
R28	3300Ω	½	28164	BTS-3300	Bias Network

Note Some models use 220Ω Resistor in this application

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	STROM-CARLSON PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC @ 2.18A	780VCT .280ADC	5 VAC @ 6A	6.3VAC @ .9A SEC 4 6.3VAC @ 6.8A	46484			

TRANSFORMER (INPUT)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	DC RESISTANCE		STROM-CARL PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.					
T2	315ΩCT	550Ω	161326				

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		STROM-CARL PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T3	2.65KΩ CT	100Volts Taps @ 8Ω 25Volts 16Ω 32Ω 70Volts	28ΩCT	2.5Ω Taps @ .33Ω .4Ω .43Ω .6Ω 1.6Ω	161325				

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				REMARKS
			STROMBERG-CARLSON PART No.		LITTELFUSE PART No.		
			FUSE	HOLDER	FUSE	HOLDER	
M1	3AG	3Amp.	25156		312003	342001	

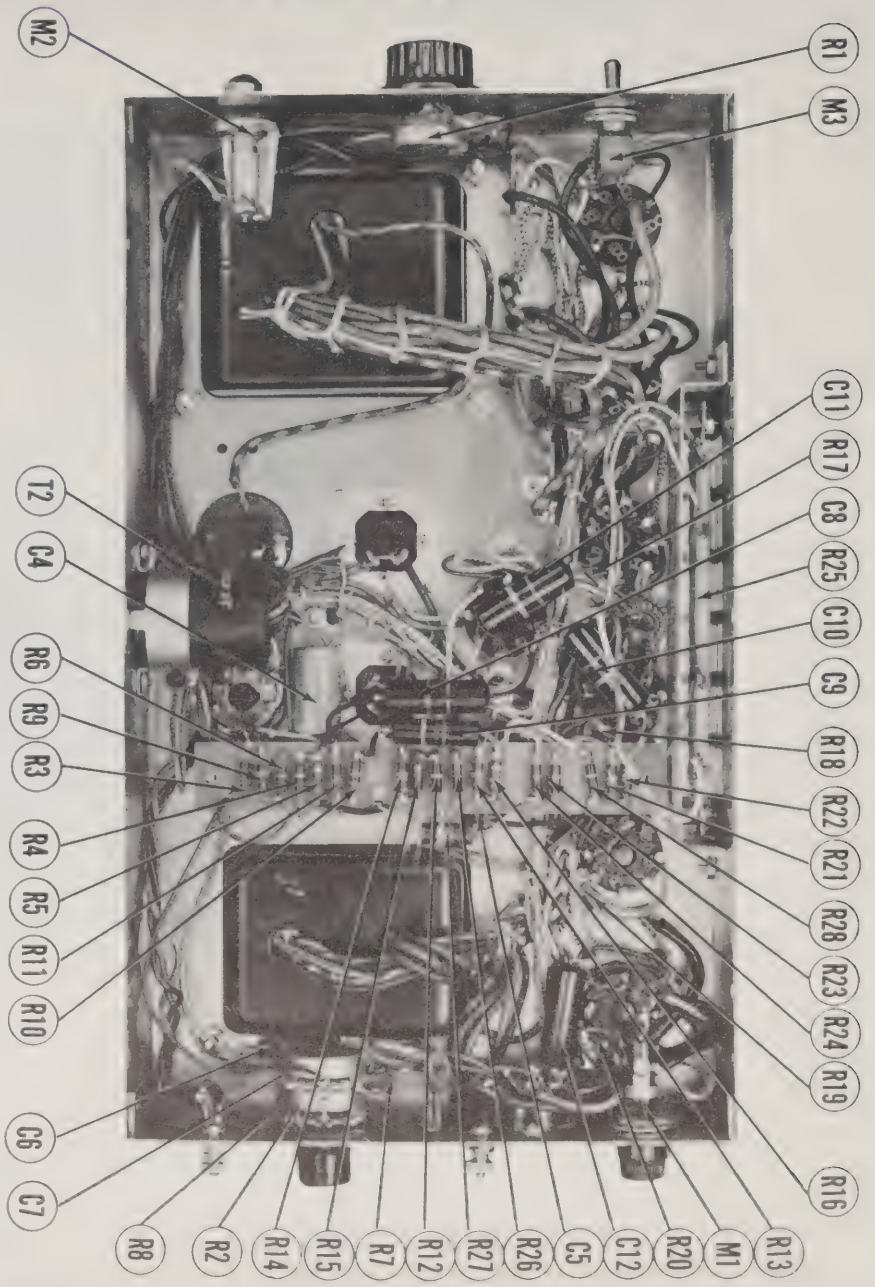
DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					STROM-CARL PART No.		
M2	Bayonet	6-8	.25	Blue	34695		Type #44

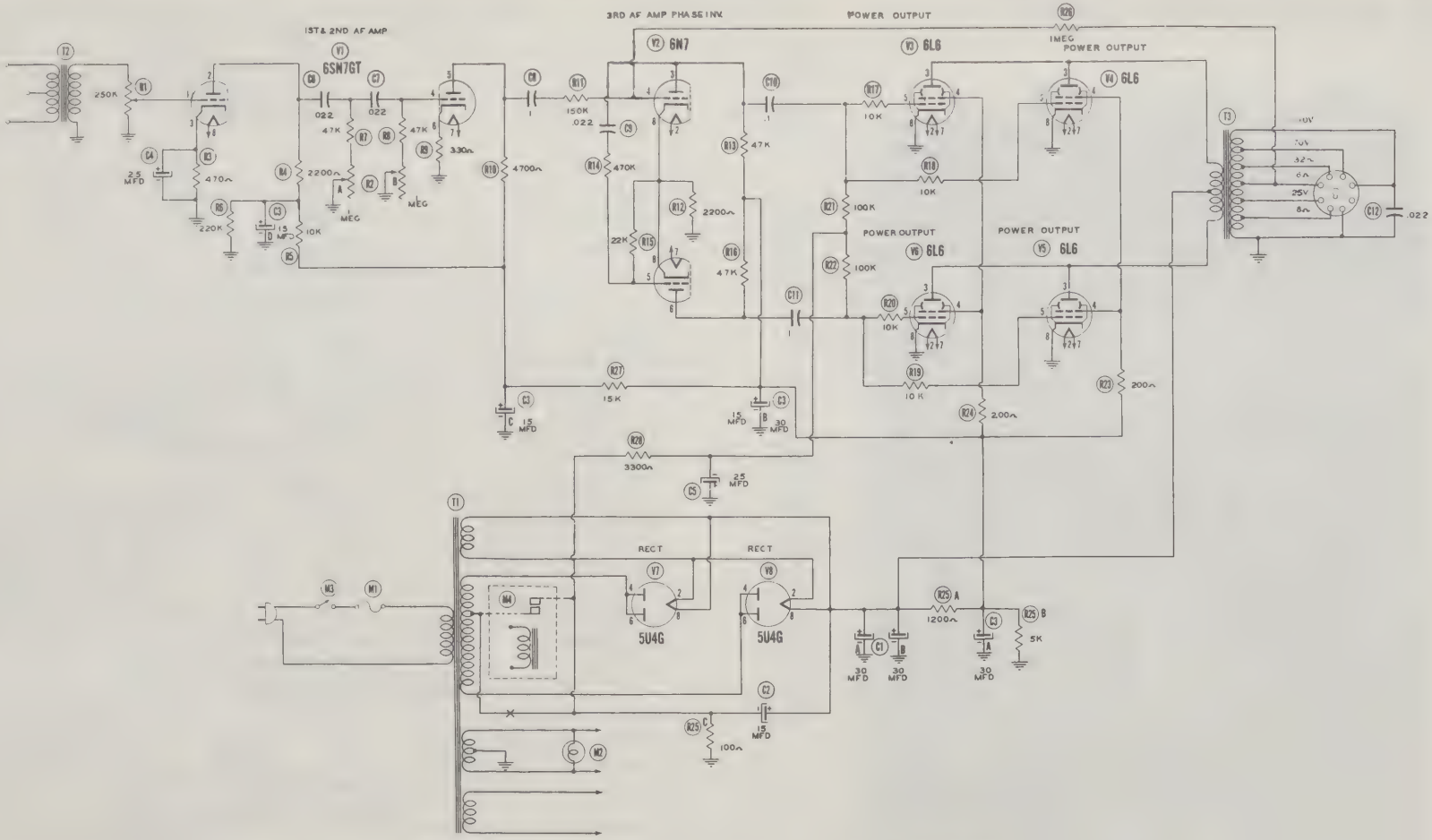
MISCELLANEOUS

ITEM No.	PART NAME	STROM-CARL PART No.	NOTES
M3	Switch	34694	On-Off
M4	Relay	46610	Not used in original equipment

CHASSIS—BOTTOM VIEW



STROMBERG-CARLSON MODEL AP-50



VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6SN7GT	0V	75VDC	1.7VDC	0V	95VDC	2VDC	¶	¶
V 2	6N7GT	0V	¶	320VDC	0V	0V	220VDC	¶	5.8VDC
V 3	6L6G	0V	¶	370VDC	280VDC	-25VDC	-26VDC	¶	0V
V 4	6L6G	0V	¶	370VDC	280VDC	-25VDC	-26VDC	¶	0V
V 5	6L6G	0V	¶	370VDC	280VDC	-25VDC	-26VDC	¶	0V
V 6	6L6G	0V	¶	370VDC	280VDC	-25VDC	-26VDC	¶	0V
V 7	5U4G	0V	370VDC	0V	340VAC	0V	340VAC	0V	370VDC
V 8	5U4G	0V	370VDC	0V	340VAC	0V	340VAC	0V	370VDC

¶ 6.3VAC MEASURED ACROSS FILAMENTS

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6SN7GT	0Ω	†25KΩ	470Ω	470Ω	†20KΩ	330Ω	.1Ω	.1Ω
V 2	6N7GT	0Ω	.1Ω	†48KΩ	1Meg	22KΩ	†48KΩ	.1Ω	2.2KΩ
V 3	6L6G	0Ω	.1Ω	†14Ω	†1.4KΩ	115KΩ	105KΩ	.1Ω	0Ω
V 4	6L6G	0Ω	.1Ω	†14Ω	†1.4KΩ	115KΩ	105KΩ	.1Ω	0Ω
V 5	6L6G	0Ω	.1Ω	†14Ω	†1.4KΩ	115KΩ	105KΩ	.1Ω	0Ω
V 6	6L6G	0Ω	.1Ω	†14Ω	†1.4KΩ	115KΩ	105KΩ	.1Ω	0Ω
V 7	5U4G	Inf.	6KΩ	Inf.	110Ω	Inf.	110Ω	Inf.	6KΩ
V 8	5U4G	Inf.	6KΩ	Inf.	110Ω	Inf.	110Ω	Inf.	6KΩ

† MEASURED FROM PIN 8 OF V8

THE COOPERATION OF THE MANUFACTURER OF THIS EQUIPMENT MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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130-13

1 - DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1000 ohms per volt.
2 - Socket connections are shown as bottom views.
3 - Measured values are from socket pin to common negative.
4 - Line voltage maintained at 117 volts for voltage readings.
5 - Nominal tolerance on component values makes possible a variation of ± 15% in voltage and resistance reading.
6 - All controls at minimum, proper output load connected.

PHOTOFACT* Folder

STROMBERG-CARLSON MODELS 119CDM, CM; 119M5A, D, G, I, M, R; 119RPM2

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MODEL 119RPM2

STROMBERG-CARLSON MODELS 119CDM, CM; 119M5A, D, G, I, M, R; 119RPM2

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STROMBERG-CARLSON MODELS 119CDM, 119M5A, D, G, I, M, R, 119RPM2

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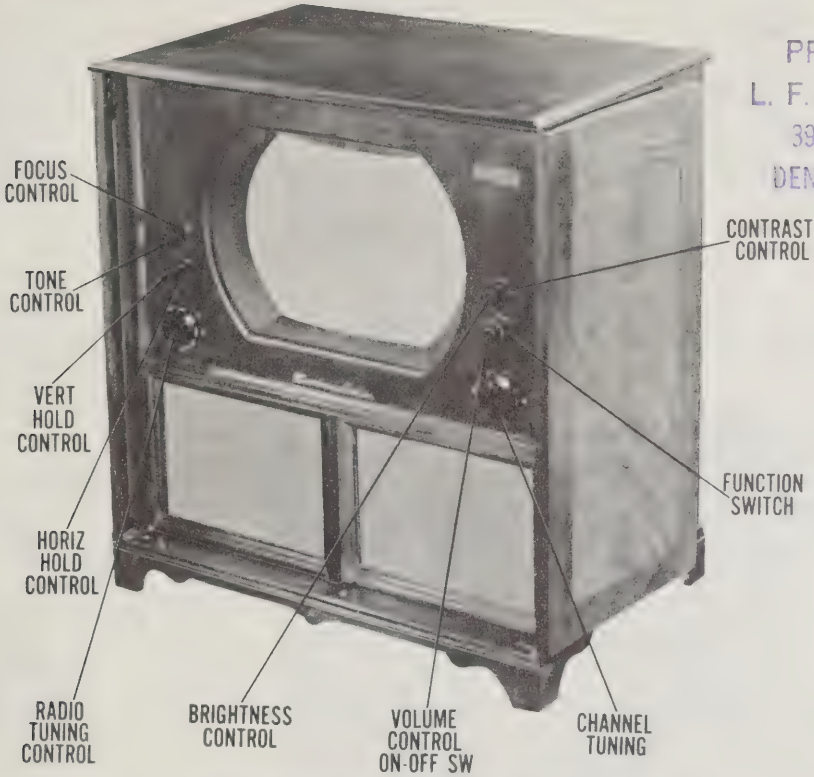

STROMBERG-CARLSON MODEL 119RPM2

TRADE NAME	Stromberg-Carlson, Model 119CDM, CM (Ch. 112107), 119M5A, D, G, I, M, R, 119RPM2 (TV Ch. 112114 & Radio Ch. 112115)
MANUFACTURER	Stromberg-Carlson Co., 100 Carlson Rd., Rochester (3) N.Y.
TYPE SET	TV-AM-FM-Phono Combination Receiver (Models 119CDM, CM TV "Only")
TUBES	Twenty Nine (TV "Only" Models) Thirty Seven (Combination Receivers)
POWER SUPPLY	110-120 Volts AC - 60 Cycle — RATING (TV) 2.7 Amp. @ 117 Volts AC (Radio) 2.45 Amp. @ 117 Volts AC
TUNING RANGE	(TV) Channels 2 thru 13 (FM) 88-108MC (AM) 535-1650KC

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STROMBERG-CARLSON MODELS 119CDM, CM, 119M5A, D, G, I, M, R, 119RPM2

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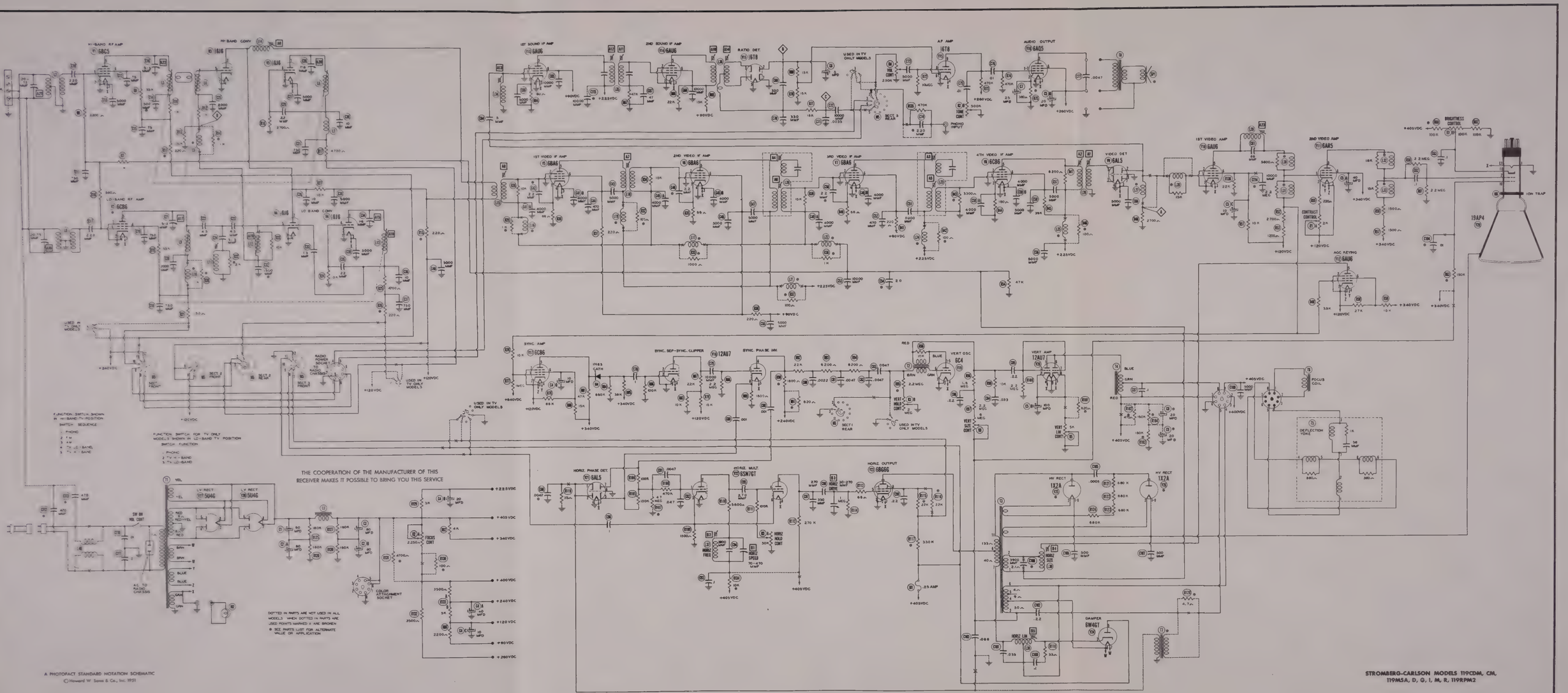

STROMBERG-CARLSON MODELS 119CDM, CM, 119M5A, D, G, I, M, R, 119RPM2

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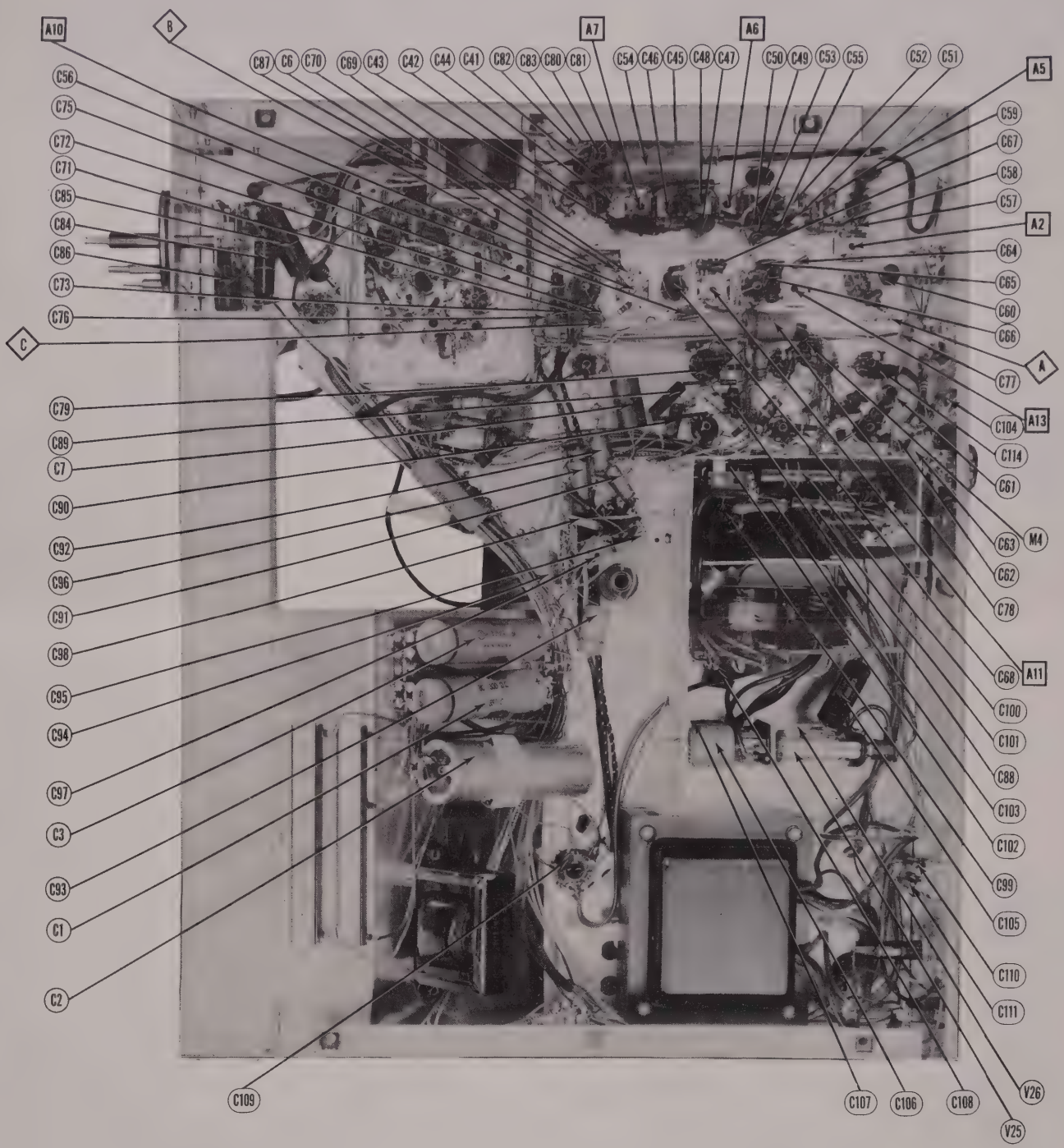
DENVER, COLORADO

CHASSIS TOP VIEW



PROPERTY OF:
L. F. BLACKENSHIP
3821 MILADE ST.
DENVER, COLORADO

CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION

PROPERTY OF
L. F. BLANKENSHIP
3624 MEADE ST.
DENVER, COLORADO

STROMBERG-CARLSON MODELS 119CDM, CM, 119M5A, D, G, I, M, R, 119RPM2

TUBE PLACEMENT CHART

TOP VIEW
BOTTOM VIEW
V27 5U4G LV RECT.
V28 5U4G LV RECT.
T1
HV RECT.
V25 1X2A
V26 1X2A
V22 6SN7GT HORIZ. MULT.
V23 6BG6G HORIZ. OUTPUT
V24 6W4GT DAMPER
V16 6AQ5 AUDIO OUTPUT
V15 6T8 RATIO DET. AF AMP.
V14 6AU6 2ND SOUND IF AMP.
V13 6AU6 1ST SOUND IF AMP.
V9 6AL5 VIDEO DET.
V8 6CB6 4TH VIDEO IF AMP.
V7 6BA6 3RD VIDEO IF AMP.
V6 6BA6 2ND VIDEO IF AMP.
V5 6BA6 1ST VIDEO IF AMP.
V4 6J6 LO BAND CONV.
V3 6J8 HI BAND CONV.
V2 6CB6 LO BAND RF AMP.
V1 6CB6 HI BAND RF AMP.
V11 6AR5 2ND VIDEO AMP.
V10 6AU6 1ST VIDEO AMP.
V12 6AU6 KEYED AGC
V17 6CB6 SYNC AMP.
V18 12AU7 SYNC. SEP. SYNC. CLIPPER SYNC. PHASE INV.
V21 6AL5 HORIZ. PHASE DET.
V19 6C4 VERT. OSC.
V20 12AU7 VERT. AMP.
L3 L9 L11 L14 L18 L20 L23 L26 L29 L34 L35 L36
T2
C4
C5

TV ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The end of the high voltage lead should be securely taped and kept away from the chassis. Do not remove the horizontal oscillator to disable the high voltage.

VIDEO IF ALIGNMENT

Turn the function selector to "low band TV" (fourth pos. clockwise).
Remove the low band converter tube (V4) and replace it with a 6J6 which has pin 1 removed. This will disable the local oscillator and prevent the possibility of erroneous indications.
Connect the negative lead of a 3 volt battery to the ungrounded lead of C54, positive to chassis.
Connect a 47KΩ isolating resistor in series with the vertical input lead of the oscilloscope.
Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	.005MFD	High side to pin 1 (grid) of 6CB6 (V8). Low side to chassis.	24.5MC (10MC SWP)	22.7MC 26.4MC	Any	Vert. amp. to Point Ⓐ. Low side to chassis.	A1, A2	Adjust for symmetrical response similar to figure 1 with markers at 90%.
2.	"	High side to pin 1 (grid) to 6BA6 (V7). Low side to chassis.	"	21.6MC	"	"	A3	Adjust for MINIMUM marker indication at the 21.6MC point on response curve.
3.	"	High side to pin 1 (grid) of 6BA6 (V6). Low side to chassis.	"	21.9MC	"	"	A4	Adjust for MINIMUM marker indication at the 21.9MC point on response curve.
4.	"	High side to pin 1 (grid) of 6BA6 (V5). Low side to chassis.	"	22.7MC 26.4MC	"	"	A5, A6, A7	Adjust for reasonably flat topped response similar to figure 2. Check for setting of the 21.6MC trap (A3). This trap is used primarily to reduce the peak below 21.9MC. The correct setting may vary slightly from 21.6MC. See figure 3 for proper adjustment condition.
5.	"	High side to an ungrounded tube shield floating over dummy converter tube (V4). Low side to chassis.	"	22.7MC 26.4MC	"	"	A8, A9	Adjust for flat topped response with markers at 70% as per figure 4.

SOUND IF ALIGNMENT

Use frequency modulated signal with 60∿ modulation and 450KC sweep. Use 120∿ sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
6.	.005MFD	High side to Point A. Low side to chassis.	4.5MC (450KC SWP)	4.5MC	Any	Vert. amp. to Point Ⓑ. Low side to chassis.	A10, A11, A12, A13	Disconnect stabilizer capacitor C6. Adjust for maximum amplitude and symmetry as per figure 5.
7.	"	"	"	"	"	Vert. amp. to Point Ⓒ. Low side to chassis.	A14	Reconnect capacitor C6. Adjust A14 so 4.5MC occurs at center of crossover lines as per figure 6. SLIGHTLY retouch A10 for maximum amplitude and straightness of cross-over lines.

TUNER ALIGNMENT

Remove the dummy converter tube and replace the original 6J6 in its socket.
The use of two marker generators are required to align the tuner of this receiver. Marker generator No. 1 is connected in parallel with the sweep generator thru a 2 or 3MMF capacitor, (if the sweep generator has a built in marker it will be used for marker #1). The frequency to which Marker #1 is tuned will be indicated in the table by an asterisk (*). Marker generator #2 is connected to an ungrounded tube shield floating over the converter tube of the band being aligned, (V3 for high band, V4 for low band). The frequency to which marker #2 is tuned will be indicated by a dagger (†).
Turn the tuning control until the tuning cores are at the extreme bottom of their travel.
Pre-set the three low band tuning cores so that the bottom edge of the core is even with the bottom edge of the last turn of the coil.
Pre-set the high band RF and oscillator cores so that the bottom end of the slug is 3/16 inch from the bottom edge of the last coil turn. The converter (center coil slug), should be set so the bottom end of the core is even with the bottom edge of the last coil turn.
Position the link between the high band RF and converter coils so the link is even with the bottom edge of the colored vinyl coil covering.
Make two marks on the chassis corresponding to the index marks on the cabinet front.
Replace the tuning knobs and position the calibrated dial so that the index on one side is centered between the 2 and 13 on the scale, and between the 6 and 7 on the opposite side.
Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

LOW BAND ALIGNMENT

Turn the function selector switch to "low band TV" (fourth position CW).

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	85MC (10MC SWP)	*87.75MC †21.9MC	6	Vert. amp. to Point Ⓓ. Low side to chassis.	A15	Adjust so markers coincide on response curve.
9.	"	"	"	83.25MC 87.75MC	"	"	A16, A17	Adjust for maximum symmetrical response similar to figure 7.
10.	"	"	57MC (10MC SWP)	*59.75MC †21.9MC	2	"	A18	Adjust tuning control in vicinity of channel 2 until markers coincide. If necessary adjust A18 to obtain proper calibration.
11.	"	"	69MC (10MC SWP)	*71.75MC †21.9MC	4	"		Adjust tuning control until markers coincide.
12.	"	"	"	67.25MC 71.75MC	4	"	A19, A17	Adjust for maximum symmetrical response similar to figure 7.
13.	"	"	85MC (10MC SWP)	*87.25MC †21.9MC	6	"	A15	Adjust tuning control until markers coincide. If necessary retouch A15 to correct calibration.
14.	"	"	"	83.25MC 87.75MC	6	"	A16, A17	Check the channel response and if necessary retouch A16 and A17 for response similar to figure 7.
15.	"	"	79MC (10MC SWP)	*77.25MC *81.75MC †21.9MC	5	"		Tune to each channel by coincidence of RF sound carrier marker and 21.9MC marker. If the response on any channel falls outside the limits of figure 8 make compromise adjustments of A17 and A19 for best overall response.
			69MC (10MC SWP)	*67.25MC *71.75MC †21.9MC	4			
			63MC (10MC SWP)	*61.25MC *65.75MC †21.9MC	3			
			57MC (10MC SWP)	*55.25MC *59.75MC †21.9MC	2			

TV ALIGNMENT INSTRUCTIONS (CONT.)

HIGH BAND ALIGNMENT

Turn the function selector switch to "high band TV" (maximum CW).

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
16.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	213MC (10MC SWP)	*215.75MC †21.9MC	13	Vert. amp. to Point D. Low side to chassis.	A20	Adjust for coincidence of the markers
17.	"	"	"	211.25MC 215.75MC	13	"	A21, A22	Adjust for symmetrical response curve similar to figure 9.
18.	"	"	177MC (10MC SWP)	*179.75MC †21.9MC	7	"		Turn tuning control until markers coincide. If necessary alter the position of the connecting strap at the base of the high band oscillator coil to correct dial calibration.
19.	"	"	"	175.25MC 179.75MC	"	"		Check for response curve similar to figure 9. If necessary adjust the coupling link for proper bandwidth.
20.	"	"	213MC (10MC SWP)	*215.75MC †21.9MC	13	"		Tune for marker coincidence. If necessary retouch A20 to correct dial calibration.
21.	"	"	"	211.25MC 215.75MC	13	"	A21, A22, A23	Check the channel 13 response. If necessary retouch A21 and A22 and adjust A23 for proper response. A23 affects primarily the bandwidth.
22.	"	"	207MC (10MC SWP)	*205.25MC *209.75MC †21.9MC	12	"		Tune to each channel by coincidence of RF sound carrier marker and 21.9MC marker. If the response on any channel falls outside the limits shown in figure 10, make compromise adjustment of A22 and coupling link for best overall response.
			201MC (10MC SWP)	*199.25MC *203.75MC †21.9MC	11			
			195MC (10MC SWP)	*193.25MC *197.75MC †21.9MC	10			
			189MC (10MC SWP)	*187.25MC *191.75MC †21.9MC	9			
			183MC (10MC SWP)	*181.25MC *185.75MC †21.9MC	8			
			177MC (10MC SWP)	*175.25MC *179.75MC †21.9MC	7			

4.5MC TRAP ADJUSTMENT

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
23.	.005MFD	High side to Point A. Low side to chassis.	Not used	4.5MC (400 ∿ Mod.)	Any	Vert. amp. to pin 2 of picture tube. Low side to chassis.	A23	Adjust for MINIMUM 400 ∿ indication on scope.

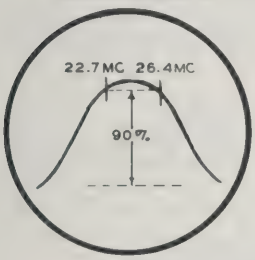


FIG. 1

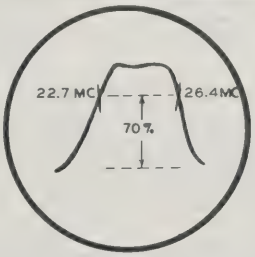


FIG. 2

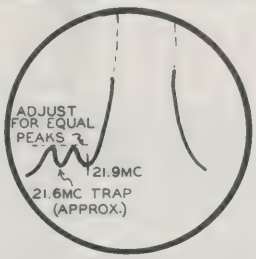


FIG. 3

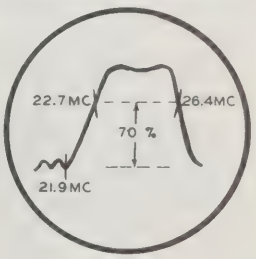


FIG. 4

FIG. 5

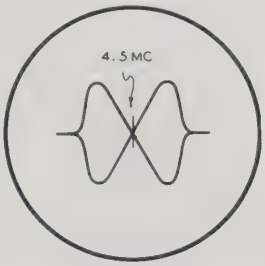


FIG. 6

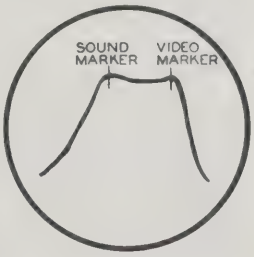


FIG. 7

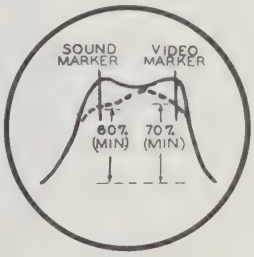


FIG. 8

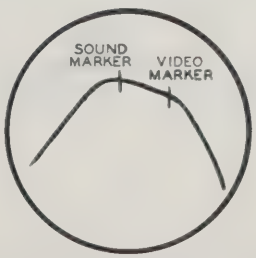


FIG. 9

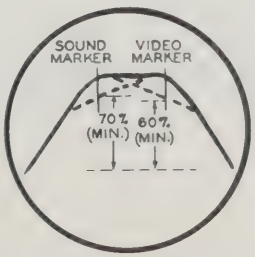


FIG. 10

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3924 MEADE ST.
DENVER, COLORADO

RADIO ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer, turn tuning cap fully closed and set pointer to last reference mark at low frequency end of dial.
If either IF channels requires alignment, it is recommended that both be realigned in the order outlined.

AM ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
24.	.01MFD	High side to pin 7 (grid) of 6BE6 (V33). Low side to chassis.	455KC (400∿ Mod.)	AM (third position CW)	Tuning gang fully closed.	Across voice coil	A24, A25, A26, A27	Adjust for maximum output.
25.	"	High side to stator on front section of tuning gang. Low side to chassis.	1650KC	"	Tuning gang fully open.	"	A28, A29	"
26.	After receiver is reinstalled in cabinet and loop connected, adjust the antenna trimmer (A30) for maximum volume while tuned to a weak station near 1500KC.							

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Connect two matched 100KΩ (± 1%) resistors in series from Point E to chassis. The junction of these two resistors is alignment Point ⟨G⟩ as shown on the schematic.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
27.	.01MFD	High side to pin 1 (grid) of 6BA6 (V34). Low side to chassis.	10.7MC (Unmod.)	FM (second position CW)	Tuning gang fully open	DC probe to Point ⟨E⟩. Common to chassis.	A31, A32, A33	Turn A36 several turns clockwise. Adjust A31, A32 and A33 for maximum deflection.
28.	"	High side to pin 7 (grid) of 6BE6 (V33). Low side to chassis.	"	"	"	"	A34, A35	Adjust for maximum deflection.
29.	"	"	"	"	"	DC probe to Point ⟨F⟩. Common to Point ⟨G⟩.	A36	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60∿ modulation and 450KC sweep. Use 120∿ sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
27.	.01MFD	High side to pin 1 (grid) of 6BA6 (V34). Low side to chassis.	10.7MC (450KC SWP)	FM (second position CW)	Point of non-interference	Vert. amp. to Point ⟨E⟩. Low side to chassis.	A31, A32, A33	Disconnect stabilizer capacitor C116. Adjust for maximum amplitude and symmetry as per figure 11.
28.	"	High side to pin 7 (grid) of 6BE6 (V33). Low side to chassis.	"	"	"	"	A34, A35	"
29.	"	"	"	"	"	Vert. amp. to Point ⟨F⟩. Low side to chassis.	A36	Reconnect capacitor C116. Adjust A36 so 10.7MC occurs at center of crossover lines as per figure 12. SLIGHTLY retouch A31 for maximum amplitude and straightness of crossover lines.

FM RF ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
30.	270Ω carbon resistor	High side thru 270Ω to ungrounded FM antenna terminal. Low side to chassis.	108.5MC (Unmod.)	FM	Tuning gang fully open.	DC probe to Point ⟨E⟩. Common to chassis.	A37	Adjust for maximum deflection.
31.	"	"	100MC	"	Tune for max. deflection.	"	A38, A39	"

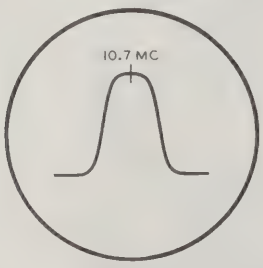


FIG.11

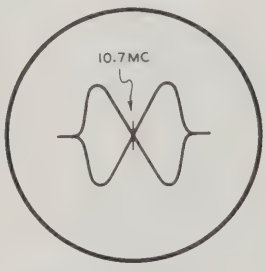
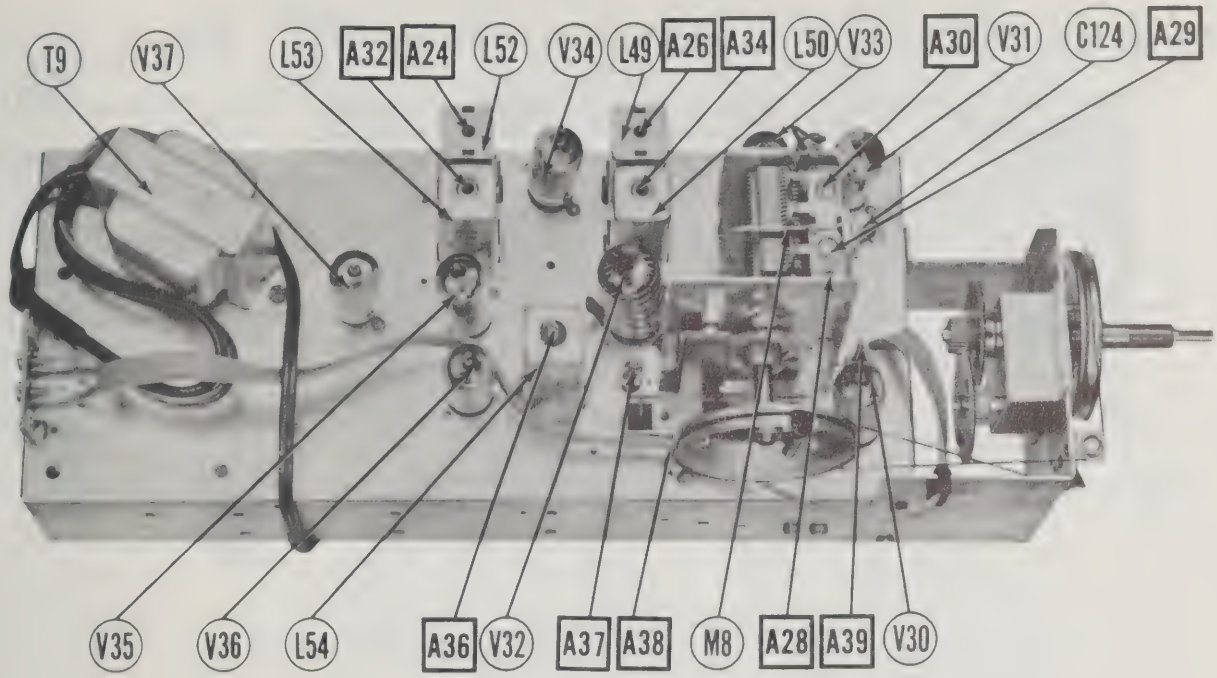


FIG.12



RADIO CHASSIS-TOP VIEW

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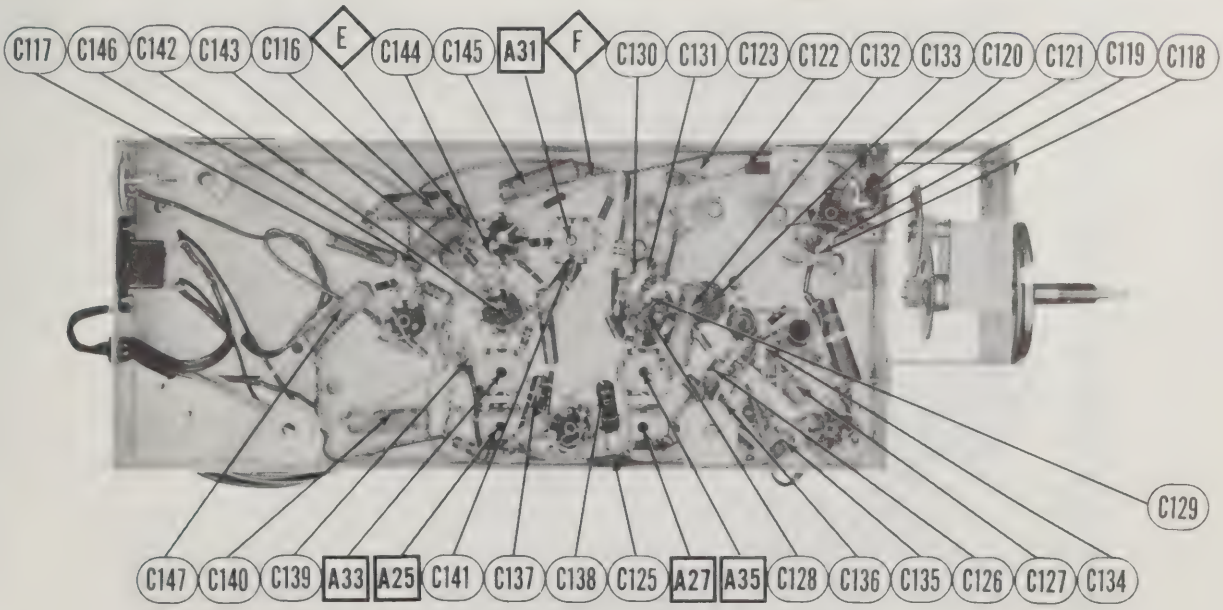
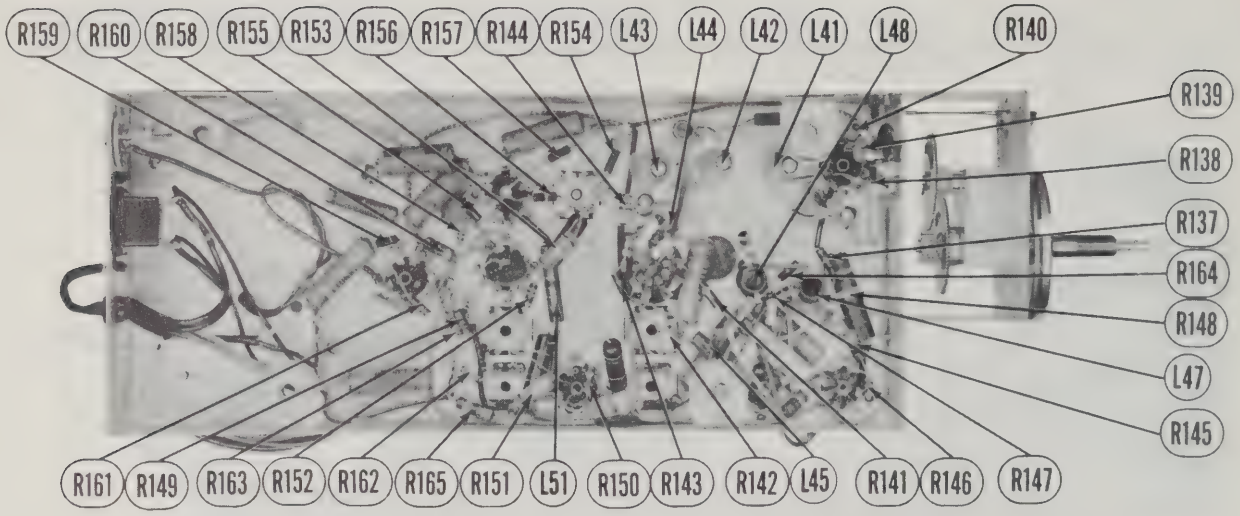
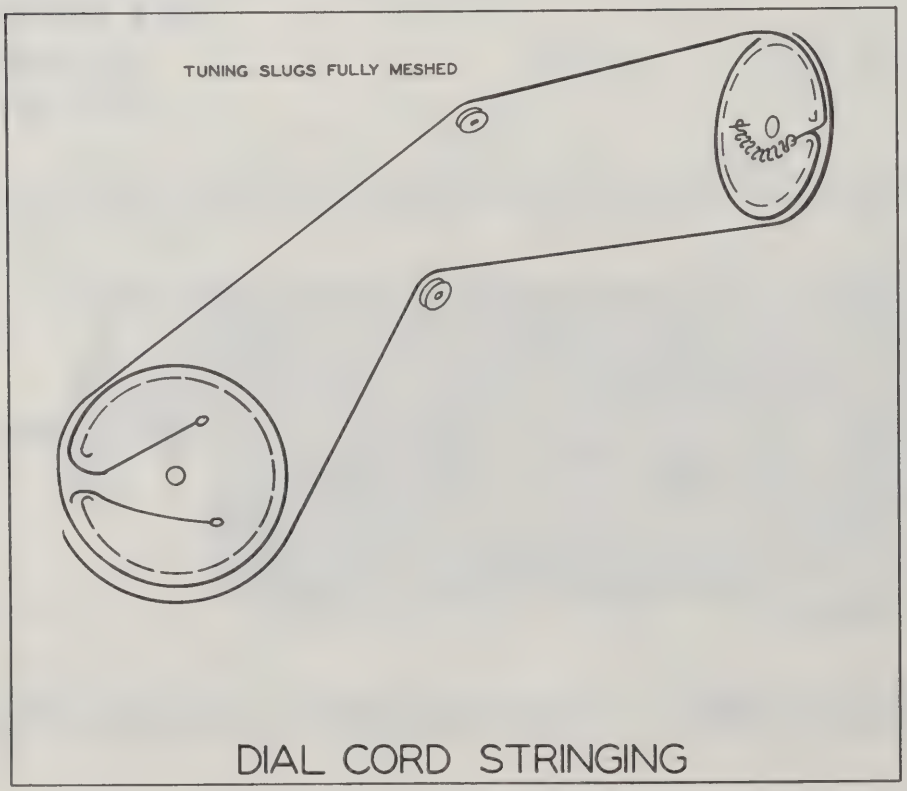


RADIO CHASSIS-BOTTOM VIEW-CAPACITOR IDENTIFICATION



RADIO CHASSIS-RESISTOR IDENTIFICATION



DIAL CORD STRINGING

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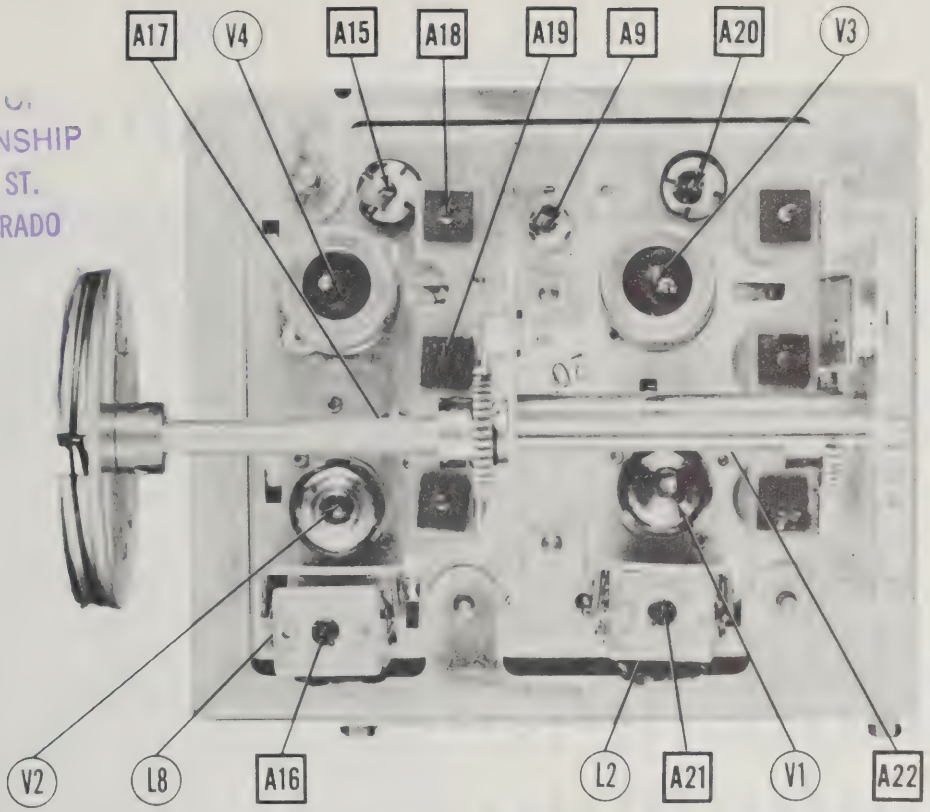
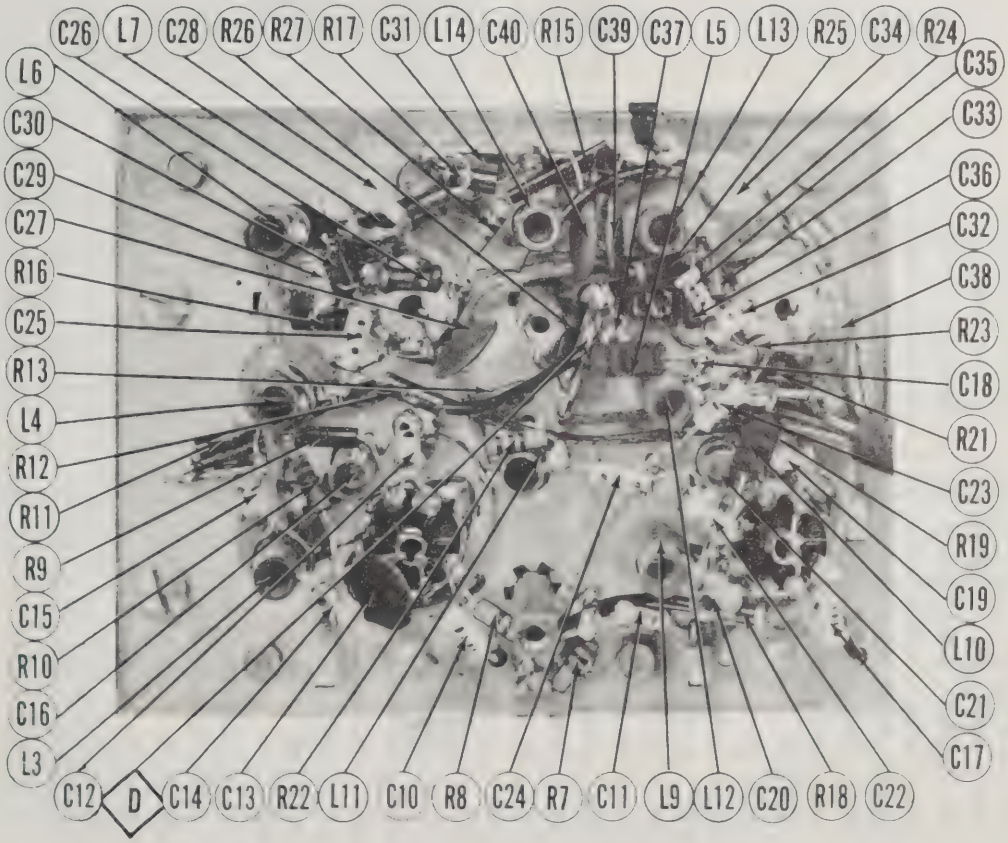


TV TUNER – TOP VIEW



TV TUNER – BOTTOM VIEW

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BC5	-.8VDC	0V	6.3VAC	0V	♦225VDC	.♦130VDC	0V		
V 2	6CB6	-.8VDC	0V	6.3VAC	0V	■230VDC	■130VDC	0V		
V 3	6J6	♦70VDC	115VDC	6.3VAC	0V	♦-3VDC	♦$-8.2VDC	0V		
V 4	6J6	■75VDC	115VDC	6.3VAC	0V	■-2.8VDC	■$-6.5VDC	0V		
V 5	6BA6	-.4VDC	0V	6.3VAC	0V	220VDC	85VDC	.7VDC		
V 6	6BA6	-.4VDC	0V	6.3VAC	0V	220VDC	85VDC	.7VDC		
V 7	6BA6	-.4VDC	0V	6.3VAC	0V	220VDC	85VDC	.7VDC		
V 8	6CB6	0V	1.3VDC	6.3VAC	0V	220VDC	160VDC	0V		
V 9	6AL5	0V	-1.8VDC	6.3VAC	0V	0V	0V	0V		
V 10	6AU6	-.6VDC	0V	6.3VAC	0V	115VDC	80VDC	0V		
V 11	6AR5	▲-10VDC	▲13VDC	▲0V	▲6.3VAC	▲180VDC	▲195VDC	▲13VDC		
V 12	6AU6	▲-9VDC	▲0V	▲0V	▲6.3VAC	▲-125VDC	▲145VDC	▲0V		
V 13	6AU6	0V	0V	6.3VAC	0V	225VDC	90VDC	1VDC		
V 14	6AU6	-.4VDC	0V	6.3VAC	0V	40VDC	40VDC	0V		
V 15	6T8	-.4VDC	-.8VDC	-.4VDC	6.3VAC	0V	-.4VDC	0V	-.9VDC	75VDC
V 16	6AQ5	0V	15VDC	6.3VAC	0V	245VDC	260VDC	0V		
V 17	6CB6	▲-3VDC	▲0V	▲0V	▲6.3VAC	▲35VDC	▲60VDC	▲0V		
V 18	12AU7	40VDC	0V	3.4VDC	6.3VAC	6.3VAC	230VDC	0V	13VDC	0V
V 19	6C4	110VDC 50VDC	0V	0V	6.3VAC	110VDC 50VDC	-2.8VDC	0V		
V 20	12AU7	400VDC 320VDC	-8VDC 0V	30VDC 0V	6.3VAC	6.3VAC	400VDC 340VDC	-8VDC 0V	30VDC 0V	0V
V 21	6AL5	0V	0V	6.3VAC	0V	7VDC	0V	-5VDC		
V 22	6SN7GT	.8VDC	285VDC	15VDC	-4.6VDC	135VDC	15VDC	0V	6.3VAC	
V 23	6BG6G	0V	0V	0V	0V	-24VDC	-24VDC	6.3VAC	300VDC	TOP CAP •
V 24	6W4GT	0V	0V	600VDC	0V	400VDC	600VDC	600VDC	600VDC	
V 25	1X2A	• DO NOT MEASURE								
V 26	1X2A	• DO NOT MEASURE								
V 27	5U4G	0V	420VDC	0V	390VAC	0V	390VAC	0V	420VDC	
V 28	5U4G	0V	420VDC	0V	390VAC	0V	390VAC	0V	420VDC	
V 29	19AP4	0V	130VDC	PIN 10 600VDC	PIN 11 270VDC	PIN 12 6.3VAC				

FUNCTION SWITCH IN TV POSITION
♦ FUNCTION SWITCH IN HIGH-BAND POSITION
■ FUNCTION SWITCH IN LOW-BAND POSITION
$ TAKEN WITH VACUUM TUBE VOLTMETER
▲ MEASURED FROM +120VDC POINT
• DO NOT MEASURE

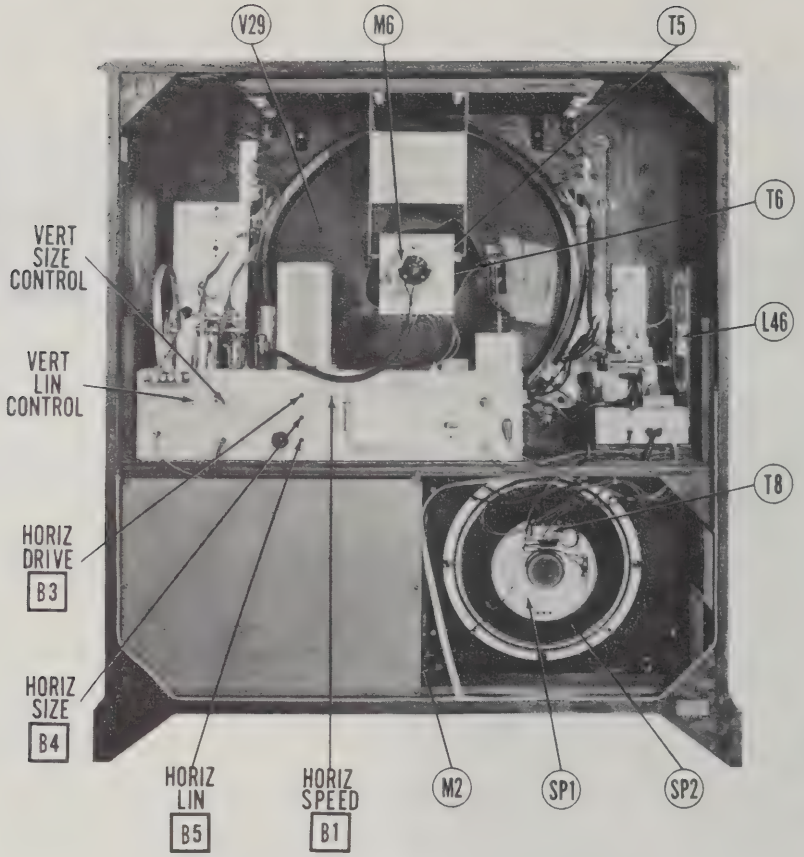
RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6CB5	50KΩ	0Ω	.1Ω	0Ω	♦†4.5KΩ	♦†36KΩ	0Ω		
V 2	6CB6	50KΩ	0Ω	.1Ω	0Ω	■†3.4KΩ	■†33KΩ	0Ω		
V 3	6J6	♦†12KΩ	†8KΩ	.1Ω	0Ω	100KΩ	2.7KΩ	0Ω		
V 4	6J6	■†12KΩ	†8KΩ	.1Ω	0Ω	100KΩ	10KΩ	0Ω		
V 5	6BA6	47KΩ	0Ω	.1Ω	0Ω	†5KΩ	†9KΩ	68Ω		
V 6	6BA6	47KΩ	0Ω	.1Ω	0Ω	†5KΩ	†9KΩ	68Ω		
V 7	6BA6	47KΩ	0Ω	.1Ω	0Ω	†5KΩ	†9KΩ	68Ω		
V 8	6CB6	.4Ω	180Ω	.1Ω	0Ω	†5KΩ	†45KΩ	0Ω		
V 9	6AL5	Inf.	2.7KΩ	.1Ω	0Ω	.5Ω	0Ω	Inf.		
V 10	6AU6	2.7KΩ	0Ω	.1Ω	0Ω	†10KΩ	†14KΩ	0Ω		
V 11	6AR5	▲3.9KΩ	▲2.4KΩ	▲0Ω	▲.1Ω	†7KΩ	†4KΩ	▲2.4KΩ		
V 12	6AU6	▲37KΩ	†8KΩ	▲0Ω	▲.1Ω	47KΩ	†10KΩ	†8KΩ		
V 13	6AU6	3.4Ω	0Ω	.1Ω	0Ω	†5KΩ	†8KΩ	180Ω		
V 14	6AU6	47KΩ	0Ω	.1Ω	0Ω	†17KΩ	†17KΩ	0Ω		
V 15	6T8	Inf.	30KΩ	Inf.	.1Ω	0Ω	15KΩ	0Ω	10Meg	†470KΩ
V 16	6AQ5	470KΩ	360Ω	.1Ω	0Ω	†4KΩ	†3.6KΩ	470KΩ		
V 17	6CB6	†20KΩ	†8KΩ	▲0Ω	▲.1Ω	†27KΩ	†20KΩ	†8KΩ		
V 18	12AU7	†45KΩ	0Ω	100KΩ	.1Ω	.1Ω	†5.3KΩ	2.2Meg	1.8KΩ	0Ω
V 19	6C4	#4Meg #10Meg	Inf.	0Ω	.1Ω	# 4Meg # 10Meg	2.2Meg	0Ω		
V 20	12AU7	†1.3KΩ	2.2Meg	5 KΩ 0Ω	.1Ω	.1Ω	†1.3KΩ	2.2Meg	5KΩ 0Ω	0Ω
V 21	6AL5	33Ω	33Ω	.1Ω	0Ω	Inf.	0Ω	Inf.		
V 22	6SN7GT	Inf.	†16KΩ	1.5KΩ	150KΩ	†280KΩ	1.5KΩ	0Ω	.1Ω	
V 23	6BG6G	Inf.	0Ω	0Ω	Inf.	1Meg	1Meg	.1Ω	†11KΩ	TOP CAP #45Ω
V 24	6W4GT	Inf.	Inf.	Inf.	Inf.	†60Ω	Inf.	Inf.	Inf.	
V 25	1X2A	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	TOP CAP #180Ω
V 26	1X2A	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	TOP CAP Inf.
V 27	5U4G	Inf.	14KΩ	Inf.	18Ω	Inf.	18Ω	Inf.	14KΩ	
V 28	5U4G	Inf.	14KΩ	Inf.	18Ω	Inf.	18Ω	Inf.	14KΩ	
V 29	19AP4	0Ω	1Meg	PIN 10 #150KΩ	PIN 11 70KΩ	PIN 12 .1Ω				

FUNCTION SWITCH IN TV POSITION
♦ FUNCTION SWITCH IN HIGH-BAND POSITION
■ FUNCTION SWITCH IN LOW-BAND POSITION
† MEASURED FROM PIN 2 OF V27
▲ MEASURED FROM +120VDC POINT
MEASURED FROM PIN 3 OF V24

ALL MEASUREMENTS TAKEN WITH PICTURE TUBE DISCONNECTED

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltage measured at 1,000 ohms.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. Front panels controls set at minimum.
6. Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.



CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably a test pattern.
Turn the horizontal hold control to the mid-position of its range.
Adjust the horizontal speed trimmer (B1) until the picture synchronizes horizontally. If the trimmer shows insufficient range, turn it to the mid-position of its range and adjust the horizontal frequency slug (B2) until picture synchronizes.
Adjust the horizontal drive trimmer (B3) counter-clockwise as far as possible without crowding the picture.
Adjust the horizontal size slug (B4) until the picture fills the mask horizontally.
Adjust the horizontal linearity slug (B5) until the picture is symmetrical from left to right.
Slight readjustment of B3 may be required for optimum results.

DISASSEMBLY INSTRUCTIONS

TV CHASSIS REMOVAL

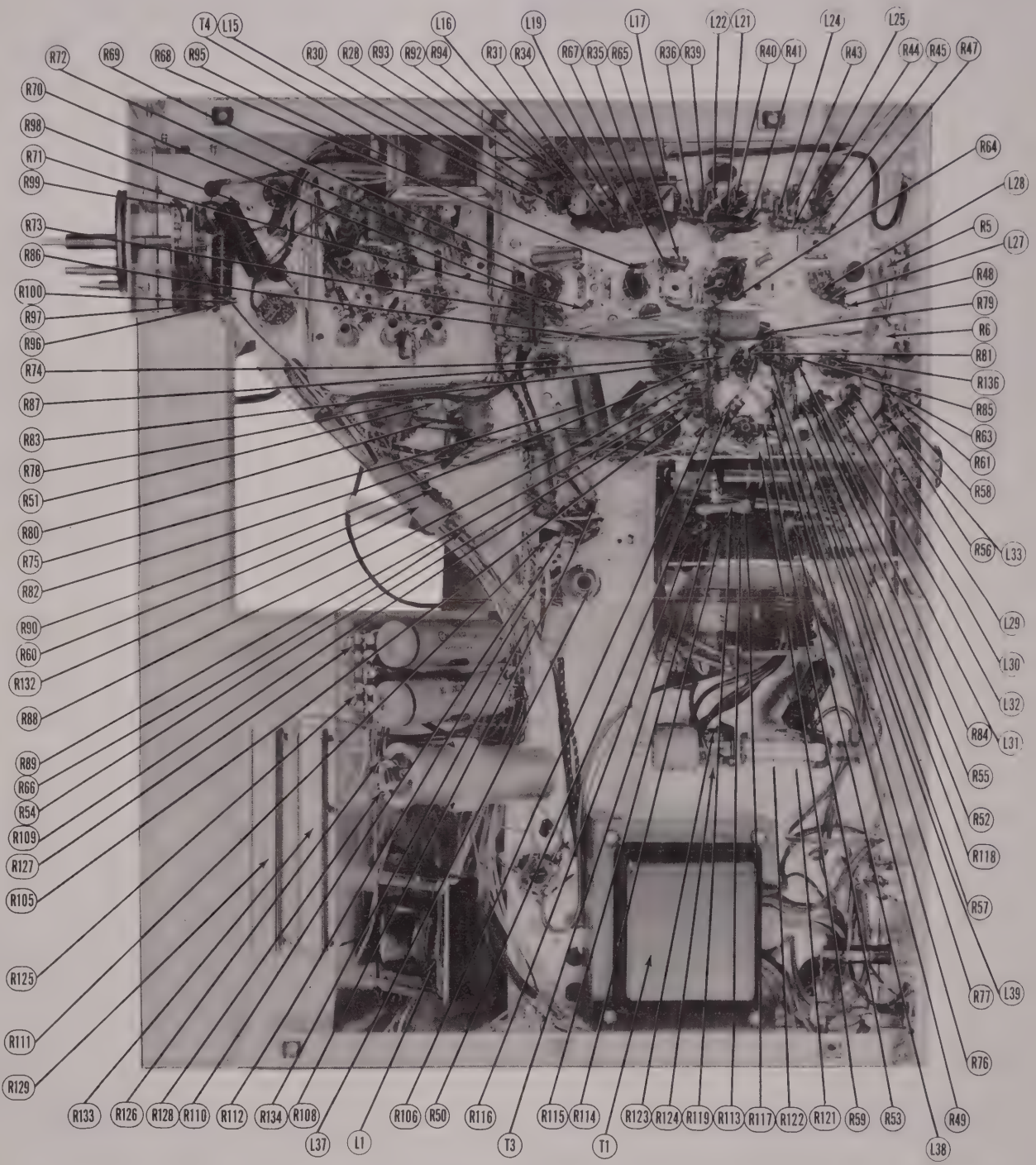
1. Remove ten push-on type control knobs.
2. Remove two 1/2" hex head nuts from remaining two knobs. Unscrew knobs.
3. Remove eight wood screws from rear cover. Remove rear cover.
4. Disconnect picture tube socket.
5. Disconnect high voltage lead.
6. Disconnect built-in antenna.
7. Disconnect phono input plug.
8. Disconnect speaker.
9. Disconnect calibration light plug.
10. Disconnect FM-AM radio power plug.
11. Disconnect FM-AM audio plug.
12. Disconnect AM loop antenna.
13. Remove two screws securing on-off volume and contrast control to cabinet.
14. Remove four 7/16" hex head bolts from chassis.
15. Disconnect yoke leads.
16. Remove chassis.

NOTE: FOR PICTURE TUBE REMOVAL IT IS NECESSARY TO REMOVE THE CHASSIS AS OUTLINED ABOVE AND IN ADDITION:

1. Remove four 11/32" hex nuts from front of cabinet.
2. Remove four 7/16" hex head bolts from sliding picture tube board mount.
3. Remove picture tube.

FM-AM CHASSIS REMOVAL

1. Disconnect phono AC plug.
2. Disconnect FM antenna .
3. Remove four 7/16" hex head bolts from chassis. Remove chassis.



PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

STROMBERG-CARLSON MODELS 119CDM, CM,
119MSA, D, G, I, M, R, 119RPM2

TV PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		STROM.-CARL PART No.	STANDARD REPLACEMENT		
V1	High Band RF Amp.	6BC5	6BC5	7BD	
V2A	Low Band RF Amp.	6CB6	6CB6	6CK	
B	Low Band RF Amp.	6BH6	6BH6	7CM	
V3	High Band Conv.	6J6	6J6	7BF	
V4	Low Band Conv.	6J6	6J6	7BF	
V5	1st Video IF Amp.	6BA6	6BA6	7BK	
V6	2nd Video IF Amp.	6BA6	6BA6	7BK	
V7	3rd Video IF Amp.	6BA6	6BA6	7BK	
V8	4th Video IF Amp.	6CB6	6CB6	6CK	
V9	Video Detector	6AL5	6AL5	6BT	
V10	1st Video IF Amp.	6AU6	6AU6	7BK	
V11	2nd Video IF Amp.	6AR5	6AR5	6CC	
V12	Keyed AGC	6AU6	6AU6	7BK	
V13	1st Sound IF Amp.	6AU6	6AU6	7BK	
V14	2nd Sound IF Amp.	6AU6	6AU6	7BK	
V15	Ratio Detector - AF Amplifier	6T8	6T8	9E	
V16	Audio Output	6AQ5	6AQ5	7BZ	
V17	Sync. Amplifier	6CB6	6CB6	6CK	
V18	Sync. Separator - Sync. Clipper - Sync. Phase Inv.	12AU7	12AU7	9A	
V19	Vert. Oscillator	6C4	6C4	6BG	
V20	Vert. Amplifier	12AU7	12AU7	9A	
V21	Horiz. Phase Detector	6AL5	6AL5	6BT	
V22	Horiz. Mult.	6SN7GT	6SN7GT	8BD	
V23	Horiz. Output	6BG6G	6BG6G	5BT	
V24	Damper	6W4GT	6W4GT	4CG	
V25A	H.V. Rectifier	1X2A	1X2A	7CB	
B	H.V. Rectifier	1X2	1X2	7CB	
V26A	H.V. Rectifier	1X2A	1X2A	7CB	
B	H.V. Rectifier	1X2	1X2	7CB	
V27	L.V. Rectifier	5U4G	5U4G	5T	
V28	L.V. Rectifier	5U4G	5U4G	5T	
V29	Picture Tube	19AP4	19AP4	12D	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA						IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	STROM-CARL PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1	80	300	111086	♦AFH16G		♦UP8030		TVA-1716	Filter
C2A	80	300	111087	AFH1616G		UP8830		TVL-2585	● Filter
B	80	300							▲ Filter
C3	80	300	111086	♦AFH16G		♦UP8030		TVA-1716	Filter
C4A	40	450	111072	AFH8422J		UP411145		TVL-4840	● Filter
B	20	450							■ Filter
C	10	450							▲ Decoupling
D	10	450							Sync. Amp. Bypass
C5A	40	450	111068	AFH8422J		UPT42145-V10		TVL-4747	● Decoupling
B	20	450		PRS50/100					■ Decoupling
C	10	450							▲ 1st V. Amp. Screen
D	100	50							Vert. Output Cathode
C6	5	50	111047	PRS150/4		BR550		TVA-1303	Stabilizing Cap
C7	25	25	111069	PRS25/25		BR252A		TVA-1205	Output Cathode
C8	20	300	111089	PRS350/24		BR2035A		TVA-1608	Vert. Output Dec. *
C9	20	300	111089	PRS350/24		BR2035A		TVA-1608	Vert. Output Dec. *
C10	220		110462	SI220	D6-221		GP2K-220	19C13	RF Coupling
C11	750		110654	SI750	D6-751		GP2K-750	19C1	AGC Filter
C12	75		110483	SI75	D6-750		GP1K-75		H.B. RF Amp. Screen
C13	5000		110586	BPD-005	DD-502		811-005	29C1	H.B. RF Amp. Fil.
C14	1500		110652	SI1500	D6-152		GP2L-0015	29C8	H.B. RF Amp. Plate Dec. †
C15	75		110483	SI75	D6-750		GP1K-75		H.B. RF Amp. Dec.
C16	.5-5		110035				532-08-.5-5		Variable Trimmer
C17	220		110462	SI220	D6-221		GP2K-220	19C13	RF Coupling
C18	750		110654	SI750	D6-751		GP2K-750	19C1	L.B. RF Amp. Dec.
C19	750		110654	SI750	D6-751		GP2K-750	19C1	L.B. RF Amp. Screen
C20	2000		110652	SI2000	D6-202		GP2M-002	29C2	L.B. RF Amp. Plate Dec.
C21	.5-5		110035				532-08-.5-5		Variable Trimmer
C22	4.5		110667	SI4.7NPO	TCZ-4.7		NPOK-4.7		RF Coupling
C23	4.5		110667	SI4.7NPO	TCZ-4.7		NPOK-4.7		RF Coupling
C24	5.5		110655						RF Coupling
C25	2000		110652	SI2000	D6-202		GP2M-002	29C2	H.B. Conv. Grid Filter
C26	10		110656	SI10N750	TCN-10		N750K-10	19C4	Fixed Trimmer
C27	5000		110586	BPD-005	DD-502		811-005	29C1	H.B. Conv. Fil.
C28	1-8		110034		829-7				Variable Trimmer
C29	22		110653	SI22	D6-220		GP1K-22	19C23	H.B. Osc. Grid
C30	10		110656	SI10N750	TCN-10		N750K-10	19C4	Osc. Feedback
C31	750		110654	SI750	D6-751		GP2K-750	19C1	H.B. Osc. Dec.
C32	1500		110652	SI1500	D6-152		GP2L-0015	29C8	L.B. Conv. Grid Filter †
C33	1.5		110438	SI1.5NPO	TCZ-1.5		NPOK-1.5		Osc. Coupling
C34	1-8		110034		829-7				Variable Trimmer
C35	22		110653	SI22	D6-220		GP1K-22	19C23	L.B. Osc. Grid
C36	10		110656	SI10N750	TCN-100		N750K-10	19C4	Osc. Feedback
C37	750		110654	SI750	D6-751		GP2K-750	19C1	L.B. Osc. Dec.
C38	5000		110586	BPD-005	DD-502		811-005	29C1	L.B. Conv. Fil.
C39	5000		110586	BPD-005	DD-502		811-005	29C1	Conv. Plate Dec.
C40	5000		110586	BPD-005	DD-502		811-005	29C1	RF Bypass
C41A	4000		110685	BPD-2X004	DD-2-502	1D5D4	822-2X004	36C2	1st V. IF Fil.
B	4000					1D5D4			1st V. IF Fil.
C42	2.2				TCZ-2.2				Fixed Trimmer §
C43	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	1st V. IF Plate Dec.
C44	470		110464	SI470	D6-471	5W5T5	GP2K-470	19C15	1st V. IF Screen
C45A	4000		110685	BPD-2X004	DD-2-250	1D5D4	822-2X004	36C2	AGC Filter
B	4000					1D5D4			2nd V. IF Fil.
C46	2.2				TCZ-2.2				Fixed Trimmer §
C47	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	wnd V. IF Plate Dec.
C48	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	2nd V. IF Screen
C49A	4000		110685	BPD-2X004	DD-2-502	1D5D4	822-2X004	36C2	AGC Filter
B	4000					1D5D4			3rd V. IF Fil.
C50	2.2				TCZ-2.2				Fixed Trimmer §
C51	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	3rd V. OF Plate Dec.

TV PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (CONT.)

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA STROM-CARL PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C52	470		110464	SI470	D6-471	5W5T5	GP2K-470	19C15	3rd V. IF Screen
C53	10000		110672	BPD-01	DD-103	PTE4S1	821-01	36C1	AGC Filter
C54	2.0	50							AGC Filter †
C55	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	RF Bypass
C56	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	RF Bypass
C57	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	4th V. IF Dec.
C58	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	4th V. IF Screen
C59A	4000		110685	BPD-2X004	DD-2-502	1D5D4	822-2X004	36C2	4th V. IF Cathode
B	4000					1D5D4			4th V. IF Fil.
C60	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	V. Det. Fil.
C61	68		110459	SI68	D6-680	5R5Q7	GP1K-68	19C10	Fixed Trimmer
C62	.1	400	110546	P488-1	DF-104	PTE4P1		4TM-P1	Video Coupling
C63	.1	400	110546	P488-1	DF-104	PTE4P1		4TM-P1	Pic. Tube Cathode
C64	5		110593	SI5NPO	TCZ-4.7	5R5V5	NPOK-5	MS-55	S. IF Coupling
C65	10000		110672	BPD-01	DD-103	PTE4S1	821-01	36C1	1st S. IF Screen
C66	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	1st S. IF Cathode
C67	47		110402	SI47	D6-470	5W5Q5	GP1K-47	19C25	2nd S. IF Grid Filter
C68	10000		110672	BPD-01	DD-103	PTE4S1	821-01	36C1	2nd S. IF Dec.
C69	330		110454	SI330	D6-331	5W5T3	GP2K-330	19C14	Diode Load Cap
C70	330		110454	SI330	D6-331	5W5T3	GP2K-330	19C14	Diode Load Cap
C71	.0033	400	110537	P688-0033	D6-332	PTE6D3	GP2M-0033	36C12	De-emphasis
C72	10000		110672	BPD-01	DD-103	PTE6S1	821-01	36C1	Audio Coupling
C73	5000		110586	BPD-005	DD-502	PTE6D5	811-005	29C1	Audio Coupling
C74	220		110462	SI220	D6-221	5W5T25	GP2K-220	19C13	Tone Comp. §
C75	.01	400	110540	P488-01	D6-103	PTE4S1	821-01	4TM-S1	Tone Comp.
C76	.01	600	110555	P688-01	D6-103	PTE6S1	821-01	6TM-S1	Audio Coupling
C77	.0047	600	110553	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Output Plate
C78	.1	600	110561	P688-1	DF-104	PTE6P1		6TM-P1	Sync. Coupling
C79	10000		110672	BPD-01	DD-103	PTE6S1	821-01	36C1	Sync. Coupling
C80	.0022	600	110551	P688-0022	D6-222	PTE6D2	GP2M-0022	6TM-D22	Integrator Net
C81	.0047	600	110553	P688-0047	D6-472	PTE6D47	GP2M-0047	6TM-D47	Integrator Net
C82	.0047	600	110553	P688-0047	D6-472	PTE6D47	GP2M-0047	6TM-D47	Integrator Net
C83	.0047	600	110553	P688-0047	D6-472	PTE6D47	GP2M-0047	6TM-D47	Vert. Osc. Grid
C84	.033	600	110558	P688-033		PTE6S3		6TM-S3	Vert. Discharge
C85	.22	400	110548	P488-22		GT4P25		4TM-P22	Vert. Sweep Coupling
C86	.22	400	110548	P488-22		GT4P25		4TM-P22	Vert. Osc. Dec.
C87	.1	600	110561	P688-1		PTE6P1		6TM-P1	Fixed Trimmer
C88	.001	600	110549	P688-001	D6-102	PTE6D1	GP2L-001	6TM-D1	Hor. Sync. Coupling
C89	.001	600	110549	P688-001	D6-102	PTE6D1	GP2L-001	6TM-D1	Hor. Sync. Coupling
C90	.0047	600	110553	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Voltage Divider *
C91	.0047	600	110553	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	AFC Filter
C92	.047	400	110544	P488-047		PTE4S5		4TM-S47	AFC Filter
C93	.1	600	110561	P688-1	DF-104	PTE6P1		6TM-P1	Hor. MV Dec.
C94	3900	500	110272	1464-004		1DR5D4		MS-24	Fixed Trimmer
C95	270	500	110289	1469-0003	D6-271	5R5T3	GP2K-270	MS-33	Horiz. MV Feedback
C96	.1	200	110415	P288-1	DF-104	PTE4P1		2TM-P1	Horiz. MV Cathode
C97	330	500	110234	SI330	D6-331		GP2K-330	19C14	Horiz. Discharge
C98	270	500	110289	1468-0003	D6-271	5W5T3	GP2K-270	1FM-325	Horiz. Sweep Coupling
C99	.22	400	110548	P488-22		GT4P25		4TM-P22	Horiz. Output Screen
C100	.1	600	110561	P688-1		PTE6P1		6TM-P1	Damper Filter
C101	.033	600	110558	P688-033					Damper Filter
C102	.22	400	110548	P488-22		GT4P25		4TM-P22	Hor. Sweep Coupling
C103	.068	1000	110573	P1088-068					Hor. Sweep Coupling
C104	.01	1000	110568	P1088-01		PTE16S1		MB-S1	Accel. Anode Bypass *
C105	.0005	10000	110658	P10088-0005		PTE100T5		TVM-351	Voltage Doubler Cap
C106	500	20000	110680	HV20B	TV1-502				H.V. Filter
C107	500	20000	110680	HV20B	TV1-502				H.V. Filter
C108	3900	500	110272	1464-004		1DR5D4		MS-24	Fixed Trimmer *
C109	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	RF Bypass
C110	.01	1000	110568	P1088-01		PTE6S1		MB-S1	Line Filter
C111	.01	1000	110568	P1088-01		PTE6S1		MB-S1	Line Filter
C112	470		110209	SI470	D6-471	5W5T5	GP2K-470	19C15	Line Ant. Coupling *
C113	470		110209	SI470	D6-471	5W5T5	GP2K-470	19C15	Line Ant. Coupling *
C114	10000		110672	BPD-01	DD-103	PTE4S1	821-01	36C1	1st V. Amp. Screen *
C115	10000		110672	BPD-01	DD-103	PTE4S1	821-01	36C1	RF Bypass *

* Not used in all models.
† Some models use 2000MMF in this application.
‡ Some models use .22MFD in this application. Mfgrs. part # 110548
§ Not used in model 119C
♦ Use insulating sleeve.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA Strom-Carl. PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	INSTALLATION NOTES
R1A	2000Ω	2	145111		RTV-256		Contrast Control - Wire Wound - Front
B	100KΩ	½					Brightness Control - Rear
R2A	2250Ω	4	145114		RTV-257		Focus Control - Wire Wound - Front
B	500K	½					Tone Control - Rear
				Concentrikit			
R3A	50KΩ	½	145110	B11-123 *	RTV-31		Horizontal Hold Control - Front
B	2Meg	½		B11-139 *			Vertical Hold Control - Rear
C	Shaft End			E-202 *			Attach Per Instructions in "Concentrikit"
R4A	250KΩ	½	145112	Q13-130	AG-64-Z	B-51-S	Volume Control
B	Shaft		Not req.	RQ	RS-2		Attach to R4A Per Instructions
C	Switch		Not req.	76-1	SWB		Attach to R4A Per Instructions
R5A	5000Ω	½	145079	Q11-114	AG-19-S	AN-10	Vertical Linearity Control
B	Shaft		Not req.	Not req.	FKS-1/4	AK-1	Attach to R5A Per Instructions
R6A	6Meg	½	145100				Vertical Size Control
B	Shaft		Not req.		FKS-1/4	AK-1	Attach to R6A Per Instructions

* Additional parts to be used with "Concentrikit".

RESISTORS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA STROM-CARL PART No.	IRC PART No.	IDENTIFICATION CODES ALL RESISTORS - 10% UNLESS OTHERWISE SPECIFIED
R7	1000Ω 20%	½	149101	BTS-1000	AGC Network
R8	2200Ω	½	149103	BTS-2000	High Band RF Amp. Grid
R9	33KΩ 20%	½	149110	BTS-33K	High Band RF Amp. Screen
R10	1000Ω 20%	½	149101	BTS-1000	High Band RF Amp. Plate Decoupling
R11	220Ω 20%	½		BTS-220	High Band RF Amp. Decoupling - See Note 3
R12	1000Ω 20%	½	149101	BTS-1000	Converter Grid
R13	100KΩ 20%	½	149113	BTS-100K	Converter Grid
R14	1000Ω	½	149101	BTS-1000	Converter Grid - See Note 2
R15	220Ω 20%	½		BTS-220	Converter Decoupling - See Note 3

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST
DENVER, COLORADO

TV PARTS LIST AND DESCRIPTIONS (Continued)

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

RESISTORS (CONT.)

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA STROM-CARL PART No.	REPLACEMENT DATA IRC PART No.	IDENTIFICATION CODES
R14	2700Ω	1	28163	BTS-2700	High Band Osc. Grid
R17	470Ω	1	149095	BTS-4700	High Band Osc. Plate
R18	560Ω	1	28155	BTS-560	Low Band RF Amp. Grid
R19	33KΩ 20%	1	149106	BTS-33K	Low Band RF Amp. Screen
R20	1000Ω	1	149101	BTS-1000	Low Band RF Amp. Plate Decoupling - See Note 2
R21	150Ω 20%	1	149096	BTS-150	Low Band RF Amp. Decoupling
R22	2000Ω 5%	1			Image Rejection Trap Coil Shunt - See Note 4
R23	10KΩ 20%	1	149110		Low Band Converter Grid Coil Shunt
R24	10KΩ 20%	1	149107		Low Band Osc. Grid
R25	4700Ω 20%	1	149105	BTS-4700	Low Band Osc. Plate
R26	220Ω	1		BTS-220	Low Band Osc. Plate Decoupling - See Note 3
R27	10KΩ 20%	1	149108		Converter Plate Coil Shunt
R28	10KΩ 20%	1	149107		1st Video IF Transformer Shunt
R29	1000Ω	1	149101	BTS-1000	AGC Network - See Note 2
R30	68Ω 20%	1	28144		1st Video IF Amp. Cathode
R31	220Ω	1	149097	BTS-220	1st Video IF Amp. Screen
R32	100Ω	1	149099	BTS-100	1st Video IF Amp. Plate Decoupling - See Note 2
R33	1000Ω	1	149101	BTS-1000	AGC Network - See Note 2
R34	10KΩ 20%	1	28170		2nd Video IF Transformer Shunt
R35	68Ω 20%	1	28144		2nd Video IF Amp. Cathode
R36	220Ω	1	149097	BTS-220	Decoupling
R37	100Ω	1	149095	BTS-100	Decoupling - See Note 2
R38	1000Ω	1	149101	BTS-1000	AGC Network - See Note 2
R39	15KΩ 20%	1	28172		3rd Video IF Transformer Shunt
R40	68Ω 20%	1	28144		3rd Video IF Amp. Cathode
R41	220Ω	1	149097	BTS-220	3rd Video IF Amp. Screen
R42	100Ω	1	149099	BTS-100	3rd Video IF Amp. Plate Decoupling - See Note 2
R43	3300Ω	1	149103	BTS-3300	4th Video IF Transformer Shunt - See Note 5
R44	180Ω	1	28149	BTS-180	4th Video IF Amp. Cathode
R45	39KΩ	1	28176	BTS-39K	4th Video IF Amp. Screen
R46	100Ω	1	149095	BTS-100	4th Video IF Amp. Decoupling - See Note 2
R47	8200Ω 20%	1	28156		5th Video IF Transformer Shunt
R48	2700Ω	1	28163	BTS-2700	Video Det. Diode Load
R49	33KΩ 20%	1	149106	BTS-33K	Keyed AGC Grid
R50	27KΩ	2	149105	BTS-27K	Voltage Divider
R51	10KΩ	1	30417	BTA-10K	1st Video Amp. Screen
R52	2700Ω	1	28163	BTS-2700	1st Video Amp. Plate
R53	1200Ω	1	28158	BTS-1200	1st Video Amp. Plate
R54	47KΩ	1	28174	BTS-47K	AGC Network
R55	22KΩ	1	149097	BTS-220	2nd Video Amp. Cathode
R56	1500Ω	2	149046	BTB-1500	2nd Video Amp. Plate
R57	1500Ω	2	149046	BTB-1500	2nd Video Amp. Plate
R58	2.2Meg 20%	1	149121	BTS-2.2Meg	Isolation
R59	33KΩ	1	30417	BTA-10K	Keyed AGC Screen
R60	10KΩ 20%	1		BTS-100K	Voltage Divider - See Note 6
R61	2.2Meg 20%	1	149121	BTS-2.2Meg	Picture Tube Grid
R62	100KΩ	1	27640	BTS-100K	Picture Tube Cathode
R63	150KΩ	1		BTS-150K	ACC Anode Load - See Note 7
R64	180Ω	1	28149	BTS-180	1st Sound IF Amp. Cathode
R65	15K	1	28172	BTA-15K	Voltage Divider
R66	22,000Ω	1	149140	BTA-3200	Decoupling
R67	47KΩ	1	149110	BTS-47K	2nd Sound IF Amp. Grid
R68	22KΩ	1	149097	BTS-22K	Voltage Divider
R69	15KΩ	1	28172	BTS-15K	Ratio Det. Diode Load
R70	15KΩ	1	28172	BTS-15K	Ratio Det. Diode Load
R71	18KΩ	1	28178	BTS-18K	De-emphasis
R72	10Meg	1	149125	BTS-10Meg	AF Amp. Grid
R73	470KΩ	1	149117	BTS-470K	AF Amp. Plate
R74	470KΩ	1	149117	BTS-470K	Output Grid
R75	3600Ω 5%	1			Output Cathode - See Note 8
R76	10KΩ 20%	1	149110	BTS-10K	Isolation
R77	1Meg	1	28191	BTS-1Meg	Isolation
R78	68KΩ	1	149133	BTS-68K	Voltage Divider
R79	15KΩ	2	149138	BTB-15K	Voltage Divider
R80	15KΩ 20%	2	149186	BTS-15K	Sync. Amp. Screen
R81	47KΩ 20%	1	31407	BTA-47K	Sync. Amp. Plate
R82	4000Ω	5	149330	1 3/4A-4000	Sync. Amp. Decoupling - Wire Wound
R83	10KΩ	1	30417	BTA-10K	Voltage Divider
R84	68KΩ 20%	1	149136	BTS-68K	Sync. Clipper Diode Load
R85	39KΩ	1	28176	BTS-39K	Voltage Divider
R86	100KΩ 20%	1	149135	BTS-100K	Sync. Clipper Cathode
R87	22KΩ		27407	BTS-22K	Sync. Clipper Plate
R88	2.2Meg 20%	1	149121	BTS-2.2Meg	Phase Inverter Grid
R89	1800Ω 20%	1	28156	BTS-1800	Phase Inverter Cathode
R90	1800Ω	1	28156	BTS-1800	Phase Inverter Plate - See Note 13
R91	820Ω	1	28157	BTS-820	Phase Inverter Plate - See Note 13
R92	22KΩ	1	27407	BTS-22K	Integrator
R93	82,000Ω	1	28169	BTS-8200	Integrator
R94	8200Ω	1	28156	BTS-8200	Integrator
R95	2.2Meg 20%	1	149121	BTS-2.2Meg.	Vertical Osc. Grid - See Note 9
R96	1.8Meg 20%	1	149124	BTS-1.8Meg	Vertical Osc. Plate
R97	2.2Meg 20%	1	149121	BTS-2.2Meg	Vertical Osc. Plate
R98	10KΩ 20%	1	28170	BTS-10K	Vertical Osc. Transformer Shunt
R99	10KΩ 20%	1	28170	BTS-10K	Vertical Peaking
R100	2.2Meg	1	149121	BTS-2.2Meg	Vertical Amp. Grid
R101	8200Ω	1	28156	BTS-820	Vertical Amp. Cathode - See Note 1
R102	470Ω	1	149078	BTA-470	Vertical Amp. Plate Decoupling - See Note 1
R103	180KΩ	1	28165	BTS-180K	Voltage Divider - See Note 1
R104	180KΩ	1	28165	BTS-180K	Voltage Divider - See Note 1
R105	100KΩ	1	28006	BTS-100K	Horizontal Phase Det. Diode Load
R106	100KΩ	1	28006	BTS-100K	Horizontal Phase Det. Diode Load
R107	4.7Meg	1	149123	BTS-4.7Meg	Horizontal Phase Det. Diode Load - See Note 1
R108	470KΩ	1	149117	BTS-470K	Horizontal AFC Filter
R109	1,500Ω	1	28160	BTS-1500	Horizontal MV Cathode
R110	5600Ω 20%	1	149134	BTS-5600	Horizontal MV Plate
R111	100KΩ	1	28006	BTS-100K	Horizontal MV Grid
R112	270KΩ	1	28184	BTS-270K	Horizontal MV Plate
R113	68Ω	1	28144		Parasitic Suppressor
R114	1Meg 20%	1	28191	BTS-1Meg	Horizontal Output Grid
R115	22KΩ	2	149057	BTB-22K	Horizontal Output Screen - See Note 12
R116	22KΩ	2	149057	BTB-22K	Horizontal Output Screen - See Note 12
R117	330KΩ	1	149199	BTA-330K	Screen Dropping - See note 10.
R118	2Ω	2	149069	BW-2-33	Horizontal Linearity Coil Shunt
R119	2Ω	2	149069	BW-2-33	Horizontal Feedback Network - Wire Wound
R120	4.7Ω	1	149133		Pulse Transformer Shunt - See Note 1
R121	68KΩ 20%	1	149136		H.V. Rectifier Load
R122	68KΩ 20%	1	149136		H.V. Rectifier Load
R123	68KΩ 20%	1	149136		H.V. Rectifier Load

RESISTORS (CONT.)

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA STROM-CARL PART No.	REPLACEMENT DATA IRC PART No.	IDENTIFICATION CODES
R124	680KΩ 20%	1	149368		H. V. Rectifier Load
R125	180KΩ	1	28182	BTS-180K	Voltage Divider
R126	180KΩ	1	28182	BTS-180K	Voltage Divider
R127	180KΩ	1	28182	BTS-180K	Voltage Divider
R128	180KΩ	1	28182	BTS-180K	Voltage Divider
R129	5000Ω	15	149372	2D-5000	Decoupling - Wire Wound
R130	100Ω	1	149167	BTA-100	Focus Coil Shunt - See Note 1
R131	4700Ω	1	149142	BTA-4700	Focus Coil Shunt - See Note 1
R132	3500Ω	20	149373	2D-3500	Decoupling - Wire Wound
R133A	3500Ω	12	149371		Voltage Divider - Wire Wound
B	5000Ω	6			Voltage Divider - Wire Wound
R134	10KΩ	1	149103	BTA-10K	Voltage Divider - See Note 4 and 11
R135	470K	1	149117	BTS-470K	Series Phono
R136	22K	1	27407	BTS-22K	Voltage Divider

Note 1. Not used in all models.
Note 2. Some models use 2.2 microhenries choke in this application.
Note 3. Some models use 150Ω resistor in this application.
Note 4. Some models use 2200Ω resistor in this application.
Note 5. Some models use 3900Ω resistor in this application.
Note 6. Some models use 150KΩ resistor in this application.
Note 7. Some models use 1000Ω resistor in this application.
Note 8. Some models use 330Ω resistor in this application.
Note 9. Some models use 1.5meg. resistor in this application.
Note 10. Some models use 390KΩ resistor in this application.
Note 11. Some models use 820Ω resistor in this application.
Note 12. Some models use single 18KΩ resistor in place of R115 and R116.
Note 13. When R91 is used, R90 is 1000Ω

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	RATING SEC. 3	REPLACEMENT DATA STROM-CARL PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA MERIT PART No.	REPLACEMENT DATA CHICAGO PART No.
T1	117VAC @ 2.7A	780VCT .300ADC	5VAC @ 6A SEC. 4 6.3VAC @ 1.0A	6.3VAC @ 1.2A SEC. 5 6.3VAC @ 7.2A	161424			

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING DC RESISTANCE PRI.	RATING DC RESISTANCE SEC.	REPLACEMENT DATA STROM-CARL PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA MERIT PART No.	REPLACEMENT DATA CHICAGO PART No.	NOTES
T2	170Ω	950Ω	161754	A-8111 ③	A-4000 ③	TB0-3 ③	Vertical Block Osc. Trans.
T3	173Ω Tap 40Ω	63Ω Taps 50Ω & 59Ω SEC. 2 2.1Ω SEC. 3 0Ω SEC. 4 0Ω	161029				Horizontal Output Trans.
T4	1.22KΩ	11.2Ω	161255	A-8112	A-3036 ③	TS0-4 ③	Vertical Output Trans.
T5A	19.2Ω		114692				Horizontal Deflection Coil
B	48.5Ω						Vertical Deflection Coil
T6	1.43KΩ		114092				Focus Coil
T7			114090 ④				Pulse Transformer

③ New mounting hole.
④ Used in early production models only.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING IMPEDANCE PRI.	RATING IMPEDANCE SEC.	RATING DC RES. PRI.	RATING DC RES. SEC.	REPLACEMENT DATA Strom-Carl. PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA MERIT PART No.	REPLACEMENT DATA CHICAGO PART No.	INSTALLATION NOTES
T8	5.65KΩ	3.4Ω	410	.32	161256	A-3877 ③	A-2930 ③	R0-9 ③	③ New mounting hole.

TRANSFORMER (FILAMENT)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	RATING SEC. 3	REPLACEMENT DATA STROM-CARL PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA MERIT PART No.	REPLACEMENT DATA CHICAGO PART No.
T9	117VAC @ .175A	6.3VAC @ 2.25A			161425	P-5014 ③		F-633

③ Drill new mounting holes.

SPEAKER

ITEM No.	RATINGS FIELD RES.	RATINGS V. C. IMP.	REPLACEMENT DATA Strom-Carl PART No.	REPLACEMENT DATA JENSEN PART No.	REPLACEMENT DATA QUAM PART No.	NOTES
SP1A	PM	3.4Ω	155154 ①	12J12	12A4A	① Used in Model 119CM and 119CDM
B	PM	3.4Ω	155197 ②	12J12	12A4A	② Used in Models 119M5A, D, G, I, M, R, and 119RPM2
	CONE DIA.	V. C. DIA.				
SP2A	11 5/8"	1"				
B	11 5/8"	1"				

FILTER CHOKE

ITEM No.	RATINGS TOTAL DIRECT CURRENT	RATINGS D. C. RESISTANCE	RATINGS INDUCTANCE (0 CURRENT 1000 cy)	REPLACEMENT DATA Strom-Carl PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA MERIT PART No.	REPLACEMENT DATA CHICAGO PART No.	INSTALLATION NOTES
L1	.290A	60Ω	2.2 Henries	161030	C-2326 ③	C-2991 ③	TR-3300 ③	③ Drill new mounting hole.

COILS (RF-IF)

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA Strom-Carl. PART No.	REPLACEMENT DATA MEISSNER PART No.	REPLACEMENT DATA IRC PART No.	NOTES
L2	Ant. Trans.	0Ω	0Ω	114676			High-Band
L3	RF Coil Primary	0Ω		114066			High-Band
L4	RF Coil Secondary	0Ω		114066			High-Band
L5	RF Choke	1.8Ω		114693		CLA	2.2Microhenries (Some Models Use 1KΩ Resistor)
L6	Osc. Coil	0Ω		114066			High-Band
L7	RF Choke	0Ω		114060			
L8	Ant. Trans.	.1Ω	.1Ω	114057			Low-Band
L9	RF Coil Primary	.1Ω		114065			Low-Band
L10	RF Choke	1.8Ω		114693		CLA	2.2Microhenries (Some Models Use 1KΩ Resistor)
L11	Image Rejection Trap	0Ω		114642			
L12	RF Coil Secondary	.1Ω		114065			Low-Band
	Osc. Coil	.1Ω		114066			Low-Band
L13	Conv. Plate Coil	.1Ω		114061			
L14	1st Video IF	.1Ω	1.1Ω	114093			
L15	RF Choke	1.8Ω		114693		CLA	2.2 Microhenries (Some Models Use 1KΩ Resistor)
L16	RF Choke	1.8Ω		114693		CLA	2.2 Microhenries (Some Models Use 1KΩ Resistor)
L17	2nd Video IF	1.1Ω	1.1Ω	114396			Includes Trap
L18	RF Choke	1.8Ω		114693		CLA	2.2 Microhenries (Some Models Use 100Ω Resistor)
L19	3rd Video IF	.5Ω	.5Ω	114397			Includes Trap
L20	RF Choke	1.8Ω		114693		CLA	2.2 Microhenries (Some Models Use 100Ω Resistor)
L21	RF Choke	1.8Ω		114693		CLA	2.2 Microhenries (Some Models Use 1KΩ Resistor)
L22	5th Video IF	.5Ω	.5Ω	114399			
L23	4th Video IF	.4Ω	.4Ω	114398			Includes Trap
L24	RF Choke	1.8Ω		114693		CLA	2.2 Microhenries (Some Models Use 100Ω Resistor)
L25	RF Choke	1.8Ω		114693		CLA	2.2 Microhenries (Some Models Use 100Ω Resistor)
L26	5th Video IF	.5Ω	.5Ω	114399			
L27A	Peaking	23Ω		114716			Red And Yellow Dots
B	Peaking			114639			Alternate
L28	Peaking	5.7Ω		114717			Wound on 15KΩ Resistor (Not Used In All Models)
L29	4.5MC Trap	1.8Ω		114383			
L30A	Peaking	8.5Ω		114708			Wound on 39KΩ or 47KΩ Resistor
B	Peaking			114637			Wound on 5.6KΩ Resistor (Alternate)
L31A	Peaking	9.2Ω		114709			Green Dot
B	Peaking			114669			Wound on 2.2 Meg Resistor (Alternate)
L32A	Peaking	10Ω		114710			Wound on 27KΩ or 33KΩ Resistor
B	Peaking			114640			Wound on 18KΩ Resistor (Alternate)
L33A	Peaking	13Ω		114711			Yellow Dot
B	Peaking			114638			Wound on 15KΩ Resistor (Alternate)
L34	1st Sound IF	3.4Ω		114400			
L35	2nd Sound IF	2Ω	2Ω	114401			
L36	Ratio Det. Trans.	5.3Ω	.8Ω	114375			
L37	Hor. Osc. Coil	115Ω		114069			
L38	Horiz. Lin	5.8Ω		114084			
L39	Horiz. Size	20Ω		114402			
L40	AC Line Choke			114696			Not Used In All Models

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA STROM-CARL PART No. FUSE	REPLACEMENT DATA STROM-CARL PART No. HOLDER	REPLACEMENT DATA LITTELFUSE PART No. FUSE	REPLACEMENT DATA LITTELFUSE PART No. HOLDER	REMARKS
M1	3AG	.250		29958	312.250	342.001	

DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA Strom-Carl PART No.	NOTES
M2	Bayonet	6-8	.25	Blue	29956	Type #44 (Cabinet Light)

MISCELLANEOUS

ITEM No.	PART NAME	STROM-CARL PART No.	NOTES
M3	RF Tuner	164015	
M4	Crystal	162094	1N-65 Sync. Clipper
M5	Switch		Function, Phono-FM-AM-Low Band TV-High Band TV
M6	Ion Trap	114845	
B3	Trimmer	110040	Horizontal Drive (30-270MMF)
B1	Trimmer	110043	Horizontal Speed (70-470MMF)
	Lens	138029	Models 119CM, 119CDM, 119RPM2
	Mask Assembly	174010	Models 119CM, 119CDM, 119RPM2
	Mask Assembly	174027	Models 119M5M, 119M5A, 119M5D, 119M5I, 119M5G, 119M5R
	Knob	134152	Tuning (Models 119CM, 119CDM, 119RPM2)
	Knob	134139	Tuning (Models 119M5M, 119M5A, 119M5D, 119M5I, 119M5G, 119M5R)
	Knob	134153	Vernier (Models 119CM, 119CDM, 119RPM2)
	Knob	134140	Vernier (Models 119M5M, 119M5A, 119M5D, 119M5I, 119M5G, 119M5R)
	Knob	134159	Function Switch (Models 119CM, 119CDM)
	Knob	134160	Function Switch (Model 119RPM2)
	Knob	134148	Function Switch (Models 119M5M, 119M5A, 119M5D, 119M5I, 119M5G, 119M5R)
	Knob	134157	Horizontal Hold (Models 119CM, 119CDM, 119RPM2)
	Knob	134145	Horizontal Hold (Models 119M5M, 119M5A, 119M5D, 119M5I, 119M5G, 119M5R)
	Knob	134154	Vertical Hold (Models 119CM, 119CDM, 119RPM2)
	Knob	134141	Vertical Hold (Models 119M5M, 119M5A, 119M5D, 119M5I, 119M5G, 119M5R)
	Knob	134155	Brightness (Models 119CM, 119CDM, 119RPM2)
	Knob	134142	Brightness (Models 119M5M, 119M5A, 119M5I, 119M5G, 119M5R)
	Knob	134156	Contrast (Models 119CM, 119CDM, 119RPM2)
	Knob	134146	Contrast (Models 119M5M, 119M5A, 119M5D, 119M5I, 119M5G, 119M5R)
	Knob	134149	Focus (Models 119CM, 119CDM, 119RPM2)
	Knob	134163	Focus (Models 119M5M, 119M5A, 119M5D, 119M5I, 119M5G, 119M5R)
	Knob	134156	Volume (Models 119CM, 119CDM, 119RPM2)
	Knob	134143	Volume (Models 119M5M, 119M5A, 119M5D, 119M5I, 119M5G, 119M5R)
	Knob	134144	Tone (Models 119CM, 119CDM, 119RPM2)
	Knob	134162	Tone (Models 119M5M, 119M5A, 119M5D, 119M5I, 119M5G, 119M5R

STROMBERG-CARLSON MODELS 119CDM, CM, 119M5A, D, G, I, M, R, 119RPM2

RADIO PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		STROM-CARL PART No.	STANDARD REPLACEMENT		
V30	FM RF Amplifier	6BA6	6BA6	7BK	
V31	AM RF Amplifier	6BA6	6BA6	7BK	
V32	FM Converter	12AT7	12AT7	9A	
V33	AM Converter	6BE6	6BE6	7CH	
V34	1st FM-AM IF Amp.	6BA6	6BA6	7BK	
V35	2nd FM IF Amp. AM Detector -AVC	6BA6	6BA6	7BK	
V36	Ratio Detector	6AL5	6AL5	6BT	
V37	FM AF Amplifier	6C4	6C4	6BG	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA						IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	STROM-CARL. PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C116	5	50	111047						Stabilizing Cap
C117	5	50	111047						FM RF Amp. Cathode
C118	10		110469	SI10NPO	TCZ-10		NPOK-10	19C3	Fixed Trimmer
C119	100		110460	SI100	D6-101	5W5T1	GP1K-100	19C11	RF Coupling
C120	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	FM RF Decoupling
C121A	4000		110685	BPD-2X004	DD-2-502	1D5D4	822-2X004	36C2	FM RF Screen
B	4000					1D5D4			FM RF Cathode
C122	100		110451	SI100	D6-101	5W5T1	GP1K-100	19C11	RF Coupling
C123	10		110469	SI10NPO	TCZ-10		NPOK-10	19C3	Fixed Trimmer
C124	100		110460	SI100	D6-101	5W5T1	GP1K-100	19C11	RF Coupling
C125	10000		110672	BPD-01	DD-103	PTE4S1	821-01	36C1	AVC Filter
C126	.01	400	110687	P488-01	DD-103	PTE4S1	821-01	4TM-S1	Decoupling
C127	.01	400	110687	P488-01	DD-103	PTE4S1	821-01	4TM-S1	Decoupling
C128	1.5		110438	SI1.5NPO	TCZ -1.5		NPOK-1.5		Osc. Coupling
C129	47		110458	SI47	D6-470	5W5Q5	GP1K-47	19C25	Osc. Grid Cap
C130	27		110690		TCN-27		N750K-27		Fixed Trimmer
C131	27		110689		TCZ-27		NPOL-27		Osc. Feedback
C132	.01	400	110687	P488-01	D6-103	PTE4S1	821-01	4TM-S1	FM Conv. Dec.
C133A	4000		110685	BPD-2X004	DD-2-502	1D5D4	822-2X004	36C2	FM Conv. Cathode
B	4000					1D5D4			FM Osc. Plate
C134	47		110458	SI47	D6-470	5W5Q5	GP1K-47	19C25	Osc. Grid Cap
C135	2.5		110412				N750K-2.5		Fixed Trimmer
C136	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	AM Conv. Fil. *
C137	.0047	600	110538	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	1st IF Dec.
C138	.0047	600	110538	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	1st IF Screen
C139	220		110462	SI220	D6-221	5W5T25	GP2K-220	19C13	Diode RF Filter
C140	.01	400	110687	P488-01	D6-103	PTE4S1	821-01	4TM-S1	Audio Coupling
C141	.01	400	110687	P488-01	D6-103	PTE4S1	821-01	4TM-S1	2nd IF Decoupling †
C142	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	2nd IF Screen
C143	5000		110586	BPD-005	DD-502	1D5D5	811-005	29C1	RF Bypass
C144	330		110463	SI330	D6-331	5W5T3	GP2K-330	19C14	Diode Load Cap
C145	.0033	600	46315	P688-0033	D6-332	PTE6D3	821-01	6TM-D33	De-emphasis
C146	.01	400	110687	P488-01	D6-103	PTE4S1	821-01	4TM-S1	Audio Coupling
C147	.01	400	110687	P488-01	D6-103	PTE4S1		4TM-S1	Audio Coupling

* Not used in all models.
† Some models use 4000MMF in this application.

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	STROM-CARL PART No.	IRC PART No.	
R137	1Meg	1/2	149119	BTS-1Meg	AVC Network
R138	68Ω	1/2	28144		FM RF Amp. Cathode
R139	27KΩ	1	34578		FM RF Amp. Screen
R140	10KΩ	1	30417		FM RF Amp. Plate
R141	2200Ω	1/2	28162	BTS-2200	FM Converter Cathode
R142	47KΩ	1	149111		FM Converter Decoupling
R143	10KΩ	1/2	149107		FM Osc. Grid
R144	1000Ω	1/2	149101	BTS-1000	Decoupling
R145	2.2Meg	1/2	149121	BTS-2.2Meg	AM RF Amp. Grid
R146	68Ω	1/2	28144		AM RF Amp. Cathode
R147	22KΩ	1/2	149109		AM Osc. Grid
R148	15KΩ	2			Screen Dropping - See Note 14
R149	2.2Meg	1/2	149121	BTS-2.2Meg	AVC Network
R150	68Ω	1/2	28144		1st IF Amp. Cathode
R151	27KΩ	1	34578		1st IF Amp. Screen
R152	68Ω	1/2	28144		2nd FM IF Amp. Cathode
R153	27KΩ	1	34578		2nd FM IF Amp. Screen
R154	1000Ω	1/2	149101	BTS-1000	2nd FM IF Amp. Decoupling
R155	22KΩ	1/2	149109	BTS-22K	Ratio Det. Diode Load
R156	270Ω	1/2		BTS-270	Balancing - See Note 15
R157	22KΩ	1/2	149109	BTS-22K	De-emphasis
R158	222Meg	1/2	149121	BTS-2.2Meg	AVC Network
R159	100KΩ	1/2	149113	BTS-100K	FM AF Amp. Grid
R160	12KΩ	1/2	28171	BTS-12K	FM AF Amp. Cathode
R161	56KΩ	1/2	28178	BTS-56K	FM AF Amp. Plate
R162	270KΩ	1/2	28184	BTS-270K	Diode Filter
R163	270KΩ	1/2	28184	BTS-270K	Det. Load
R164	2000Ω	1/2			AM RF Coil Shunt - See Note 16
R165	1500Ω	1/2	28160	BTS-1500	1st IF Amp. Decoupling - See Note 16

Note 14. Some models use 12KΩ resistor in this application.
Note 15. Some models use 180Ω resistor in this application.
Note 16 Not used in all models.

RADIO PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA			NOTES
		PRI.	SEC.	Strom-Carl PART No.	MEISSNER PART No.	IRC PART No.	
L41	FM Ant. Coil	0Ω		114097			
L42	FM RF Coil	0Ω		114098			
L43	FM Osc. Coil	0Ω		114098			
L44	RF Choke	1.8Ω		114693		CLA	2.2 Microhenries
L45	Fil. Choke	1.8Ω		114693		CLA	2.2 Microhenries
L46	Loop Ant.	1.9Ω		139047			
L47	AM RF Coil	1.3Ω	10Ω	114095			Secondary Tapped at 4.2Ω
L48	AM Osc. Coil	7.9Ω		114096			Tap at .5Ω
L49	1st AM IF	17Ω	17Ω	114364			
L50	1st FM IF	1.5Ω	1.5Ω	114403			
L51	Fil. Choke	.4Ω		114697		CL-1	1 Microhenry
L52	2nd AM IF	17Ω	17Ω	114364			
L53	2nd FM IF	1.4Ω	1.4Ω	114363			
L54	Ratio Det. Trans.	3Ω	.5Ω	114404			

PHONO CARTRIDGE and NEEDLE

ITEM No.	REPLACEMENT DATA							REMARKS
	STROM-CARL PART No.	ASTATIC PART No.		SHURE PART No.		ELECTRO-VOICE PART No.		
		CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	
M7		LQD-1J	"Q" Q-33			96-T	0-3 or S-1	

ASTATIC AND ELECTRO-VOICE NEEDLE LISTINGS SHOWN ABOVE ARE SPECIFIED FOR THE RESPECTIVE REPLACEMENT CARTRIDGES LISTED.

MISCELLANEOUS

ITEM No.	PART NAME	STROM-CARL PART No.	NOTES
M8	Tuning Capacitor	110044	(30-512MMF, 18-257MMF, 15-105MMF)
	Knob	134151	Tuning (Models 119RPM2, 119M5M)
	Knob	134138	Tuning (Models 119M5A, 119M5D, 119M5I, 119M5G, 119M5R)

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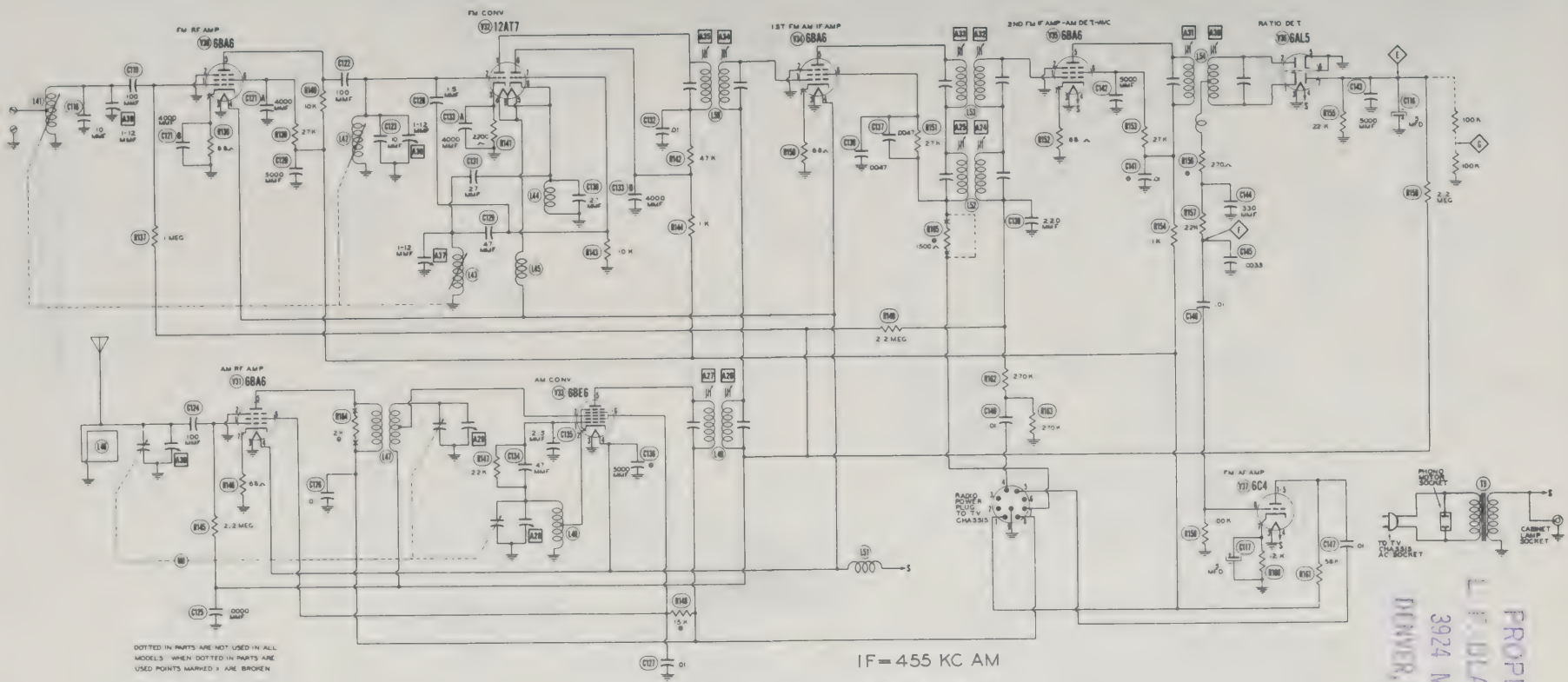

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V30	6BA6	9-11VDC	0V	0V	6VAC	110VDC	196VDC	1.7VDC		
V31	6BA6	8-11VDC	0V	0V	6VAC	225VDC	275VDC	6.5VDC		
V32	12AT7	120VDC	0V	94.8VDC	3.5VAC	3.5VAC	118VDC	88-3.6VDC	0V	0V
V33	6BE6	84-87VDC	0V	0V	6VAC	.225VDC	275VDC	6-.3VDC		
V34	6BA6	9-.3VDC	0V	0V	6VAC	91.75VDC 220VDC	98VDC 110VDC	1.6VDC 21VDC		
V35	6BA6	9-.3VDC	0V	0V	6.3VAC	118VDC .5V	165VDC .5V	9.6VDC .5V		
V36	6AL5	9-.9VDC	9-.9VDC	0V	6.3VAC	0V	0V	9-.3VDC		
V37	6C4	164-168VDC .45V	0V	0V	6.3VAC	91-165VDC .45V	1.0V	95-98VDC .45V		

‡ TAKEN WITH VACUUM TUBE VOLTMETER

FUNCTION SWITCH IN AM OR FM POSITION
§ TAKEN IN FM POSITION
§ TAKEN IN AM POSITION

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V30	6BA6	2.5MEG	0Ω	0Ω	4Ω	91KΩ 47ΩΩ 1ΩΩ	91KΩ 47ΩΩ 1ΩΩ	68Ω		
V31	6BA6	2.5MEG	0Ω	0Ω	4Ω	91KΩ	91KΩ 91KΩ	68Ω		
V32	12AT7	975KΩ 47ΩΩ	8Ω	3.2KΩ	2.2Ω	2.2Ω 1 Ω	2.2Ω 1 Ω	10KΩ	1.8Ω	1.8Ω
V33	6BE6	330Ω	1Ω	0Ω	4Ω	91KΩ	91KΩ	1.5Meg		
V34	6BA6	1.5Meg	0Ω	0Ω	4Ω	19KΩ 91KΩ	133KΩ 91KΩ	68Ω		
V35	6BA6	540KΩ	0Ω	0Ω	2Ω	91KΩ 1 Ω	91KΩ 1 Ω	68Ω		
V36	6AL5	Inf.	Inf.	0Ω	3Ω	3Ω 91KΩ	0Ω	330Ω		
V37	6C4	975KΩ Max.	0Ω	0Ω	3Ω	91KΩ 1 Inf.	100KΩ	18KΩ		

† MEASURED FROM PIN 3 OF V 27

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STROMBERG-CARLSON MODELS 119CDM, CM, 119M5A, D, G, I, M, R, 119RPM2

RADIO SCHEMATIC

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PHOTOFACT* Folder

TRANSVISION MODEL

CHASSIS A-3

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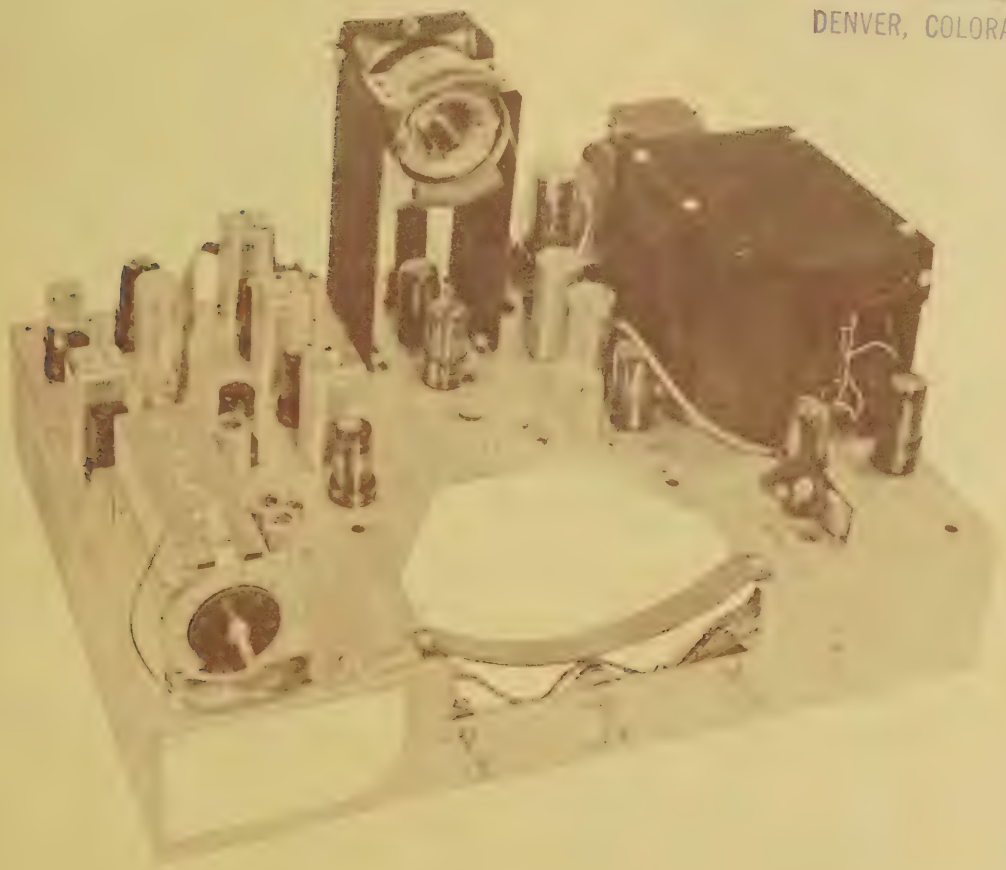

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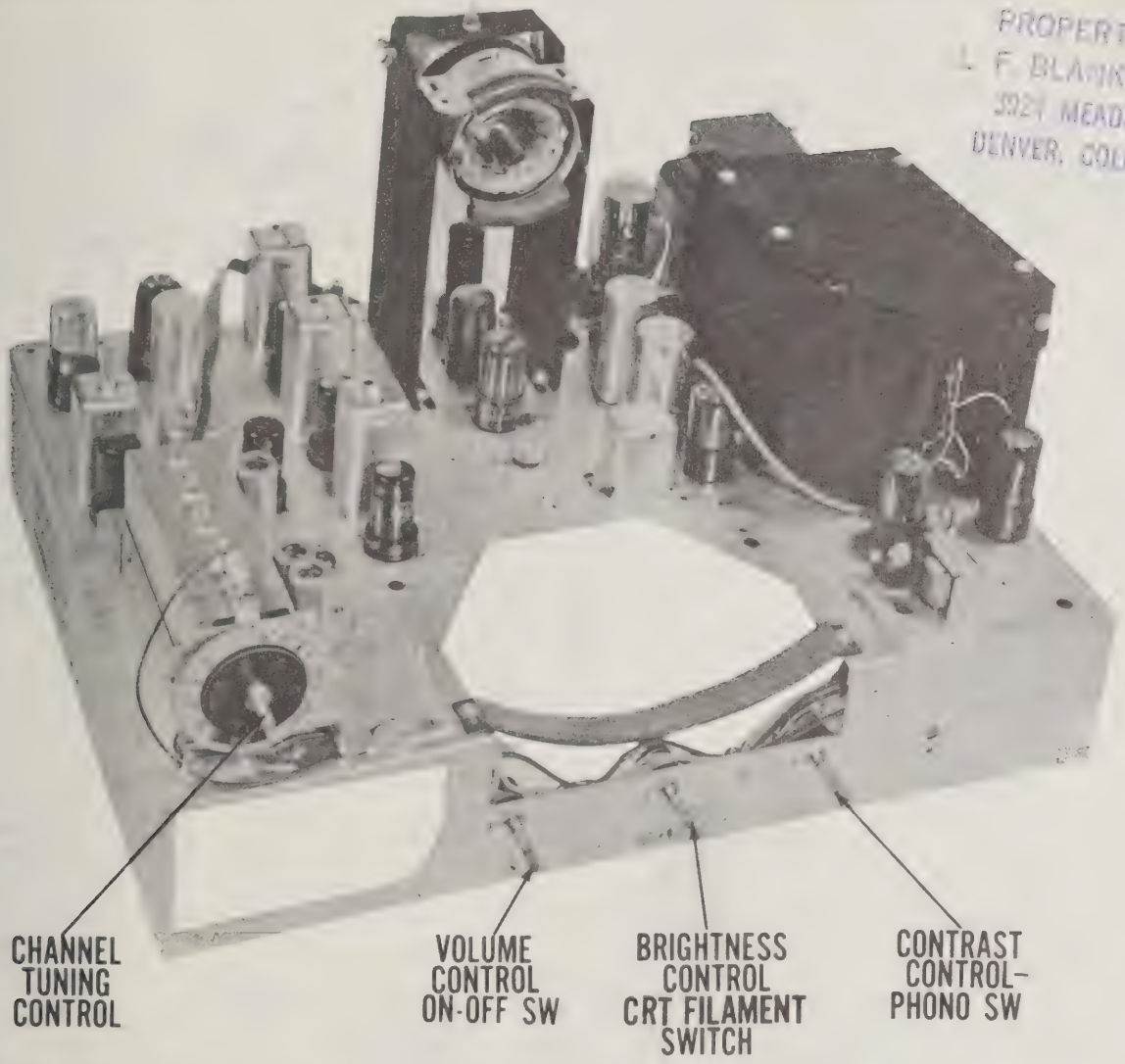

TRANSVISION
CHASSIS A-3

TRADE NAME	Transvision, Chassis A-3
MANUFACTURER	Transvision Inc., New Rochelle, New York
TYPE SET	Television Receiver
TUBES	Twenty Six
POWER SUPPLY	110-120 Volts AC - 60 Cycle
TUNING RANGE—	Channels 2 thru 13

RATING 2.55 Amp. @ 117 Volts AC

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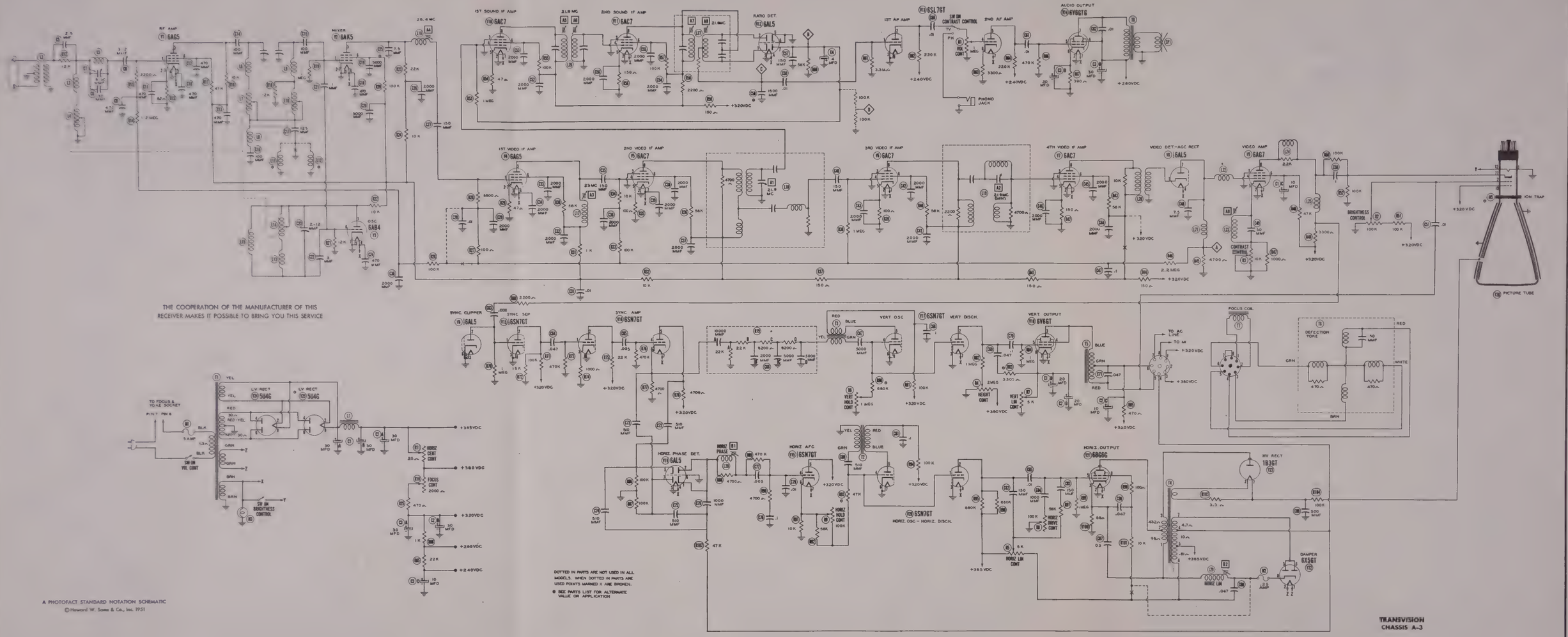

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DOTTED IN PARTS ARE NOT USED IN ALL MODELS. WHEN DOTTED IN PARTS ARE USED POINTS MARKED X ARE BROKEN.

⊕ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

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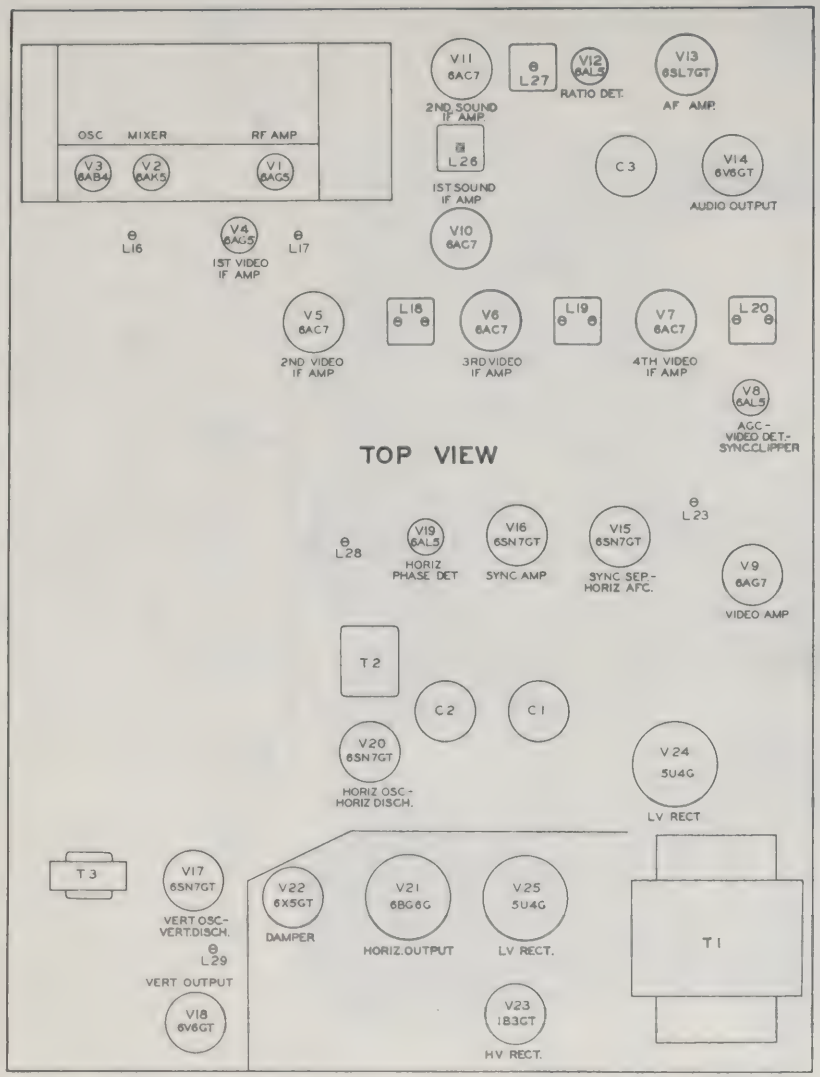
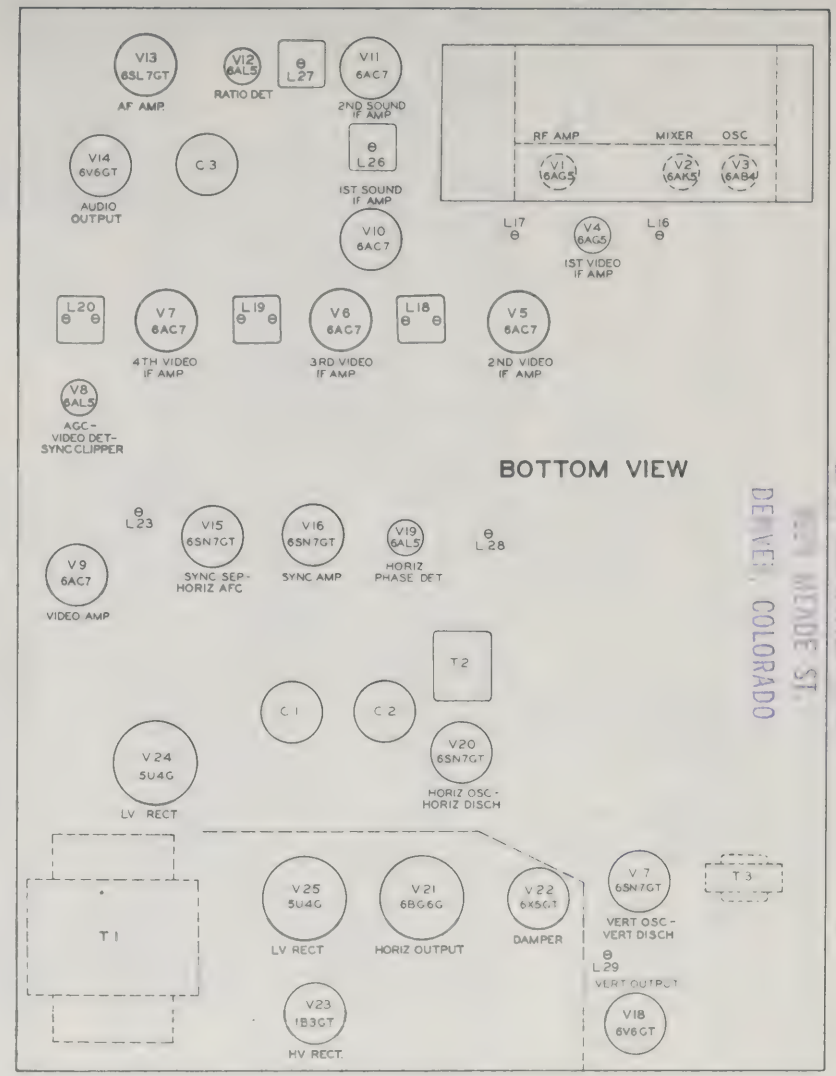
TRANSVISION CHASSIS A-3

TRANSVISION CHASSIS A-3





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TUBE PLACEMENT CHART

TRANSVISION
CHASSIS A-3

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The end of the high voltage lead shou'd be securely taped and kept away from the chassis. Do not remove the horizontal oscillator tube to disable the high voltage.

VIDEO IF ALIGNMENT

Remove the local oscillator tube (V3) from its socket to prevent the possibility of erroneous indications.
Connect the negative lead of a 3 volt battery to the junction of R46 and C47, connect the positive lead to chassis.
Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Direct	High side to an ungrounded tube shield floating over mixer tube (V2). Low side to chassis.	Not used	21.9MC (Unmod.)	Any	USE VTVM DC probe to Point (A). Common to chassis.	A1, A2	Adjust for MINIMUM deflection.
2.	"	"	24MC (10MC SWP)	21.9MC 22.5MC 26.4MC	"	Vert. amp. to Point (A). Low side to chassis.	A3, A4	Adjust for response curve similar to figure 1.

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Connect two matched 100KΩ (± 1%) resistors from Point B to chassis. The junction of these two resistors is alignment Point D as shown on the schematic.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
3.	Direct	High side to an ungrounded tube shield floating over mixer tube (V2). Low side to chassis.	21.9MC (Unmod.)	Any	DC probe to Point (B). Common to chassis.	A5, A6	Adjust for maximum deflection.
4.	"	"	"	"	DC probe to Point (C). Common to Point (D).	A8	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60 ∿ modulation and 450KC sweep. Use 120 ∿ sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
3.	Direct	High side to an ungrounded tube shield floating over mixer tube (V2). Low side to chassis.	21.9MC (450KC SWP)	21.9MC	Any	Vert. Amp. to Point (B). Low side to chassis.	A5, A6, A7	Disconnect stabilizer capacitor C4. Adjust for maximum amplitude and symmetry as per figure 2.
4.	"	"	"	"	"	Vert. amp. to Point (C). Low side to chassis.	A8	Reconnect capacitor C4. Adjust A8 so 21.9MC occurs at center of crossover lines as per figure 3. SLIGHTLY retouch A5 for max. amplitude and straightness of crossover lines.

4.5MC TRAP ADJUSTMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
5.	.005MFD	High side to pin 4 (grid) of 6AG7 (V8). Low side to chassis.	4.5MC (Unmod.)	Any	DC probe thru detector (figure 4), to pin 11 of picture tube. Common to chassis.	A9	Adjust for MINIMUM deflection.

THE RF TUNER PORTION OF THIS RECEIVER HAS BEEN PROPERLY ALIGNED AT THE FACTORY AND IS VERY STABLE. ALIGNMENT OF THIS PORTION SHOULD NOT BE REQUIRED IN THE FIELD.

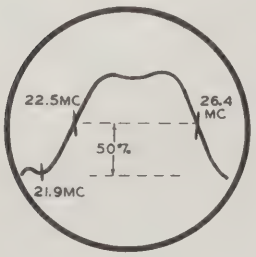


FIG. 1

FIG. 2

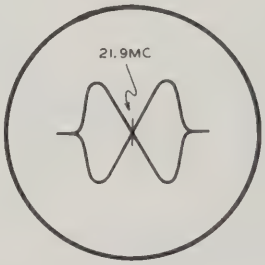


FIG. 3

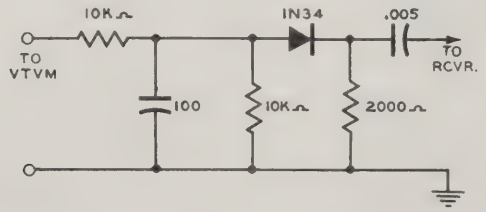
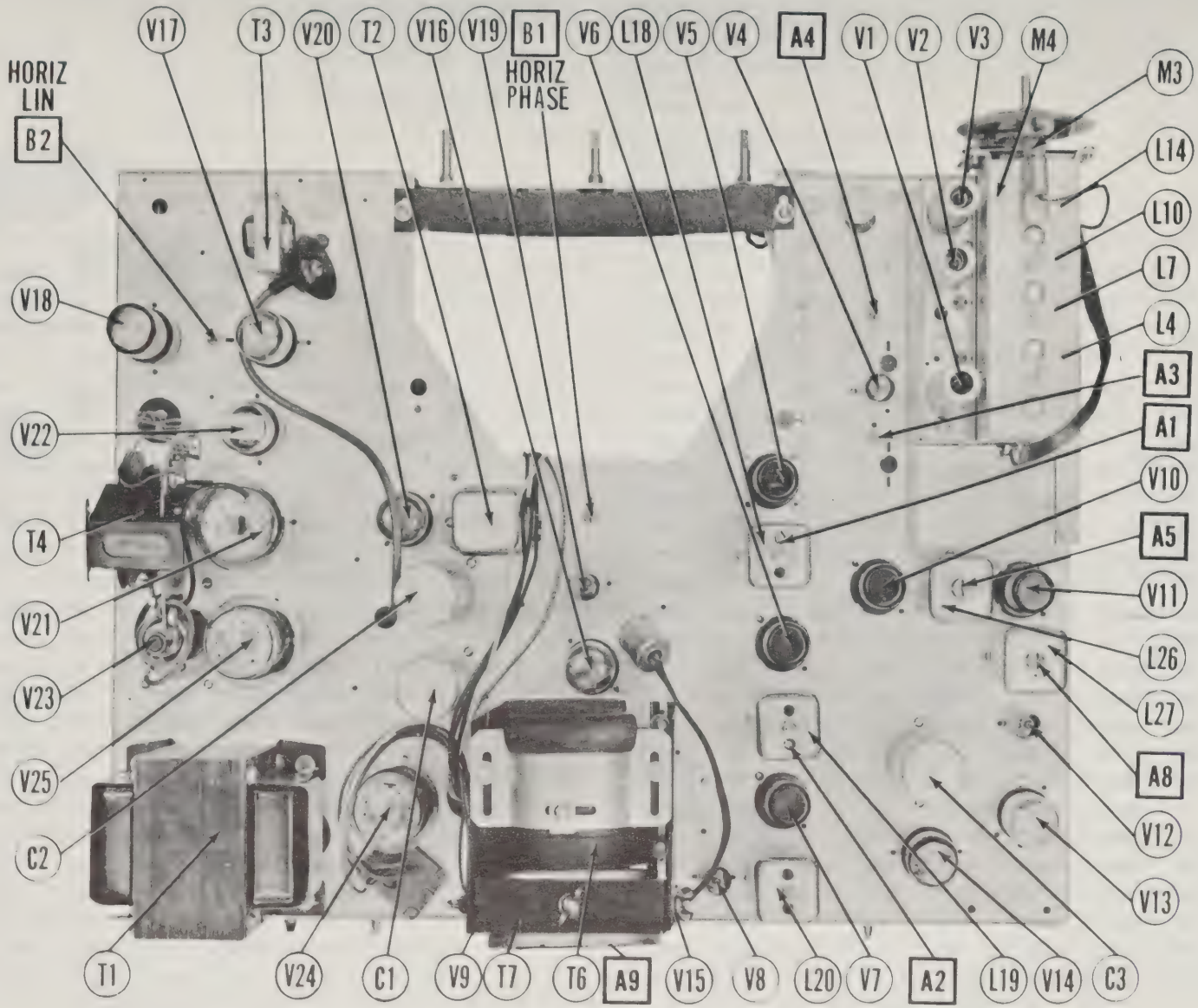


FIG. 4



CHASSIS TOP VIEW

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6AG5	-.3VDC	.3VDC	6.3VAC	0V	165VDC	90VDC	.3VDC		
V 2	6AK5	-.5VDC	0V	0V	6.3VAC	70VDC	40VDC	0V		
V 3	6AB4	100VDC	0V	0V	6.3VAC	0V	§-3.8VDC	0V		
V 4	6AG5	-.5VDC	.2VDC	0V	6.3VAC	130VDC	70VDC	.2VDC		
V 5	6AC7	0V	0V	0V	-.2VDC	.5VDC	180VDC	6.3VAC	295VDC	
V 6	6AC7	0V	0V	0V	-.1VDC	.8VDC	150VDC	6.3VAC	300VDC	
V 7	6AC7	0V	0V	0V	0V	2VDC	150VDC	6.3VAC	305VDC	
V 8	6AL5	0V	-1.3VDC	0V	6.3VAC	0V	0V	-.2VDC		
V 9	6AG7	0V	0V	0V	-.2VDC	8VDC	235VDC	6.3VAC	290VDC	
V 10	6AC7	0V	0V	0V	-.2VDC	.3VDC	160VDC	6.3VAC	310VDC	
V 11	6AC7	0V	0V	0V	0V	1.5VDC	125VDC	6.3VAC	285VDC	
V 12	6AL5	-.2VDC	-.2VDC	0V	6.3VAC	0V	0V	-.3VDC		
V 13	6SL7GT	-.8VDC	80VDC	0V	0V	125VDC	1.8VDC	6.3VAC	0V	
V 14	6V6GT	0V	0V	270VDC	280VDC	0V	0V	6.3VAC	17VDC	
V 15	6SN7GT	-1.3VDC	45VDC	0V	-.7VDC	320VDC	13VDC	6.3VAC	0V	
V 16	6SN7GT	0V	175VDC	6.2VDC	-.8VDC	300VDC	20VDC	6.3VAC	0V	
V 17	6SN7GT	-90VDC -115VDC	170VDC 0V	0V	-90VDC -115VDC	250VDC 285VDC	0V	6.3VAC	0V	
V 18	6V6GT	0V	6.3VAC	320VDC 215VDC	320VDC 215VDC	-4VDC 0V	0V	0V	35VDC 0V	
V 19	6AL5	-2.4VDC .8VDC	-2.4VDC .8VDC	0V	6.3VAC	10VDC	0V	-10VDC		
V 20	6SN7GT	-38VDC -50VDC	155VDC 25VDC	0V	-38VDC -50VDC	235VDC 170VDC	0V	0V	6.3VAC	
V 21	6BG6G	0V	0V	9VDC 5VDC	380VDC	-25VDC -2VDC	380VDC	6.3VAC	275VDC 240VDC	TOPCAP *
V 22	6X5GT	0V	¶	370VDC	370VDC	370VDC	0V	¶	525VDC	
V 23	1B3GT	* DO NOT MEASURE								
V 24	5U4G	0V	400VDC	0V	365VAC	0V	365VAC	0V	400VDC	
V 25	5U4G	0V	400VDC	0V	365VAC	0V	365VAC	0V	400VDC	
V 26	PIX TUBE	0V	0V	PIN 10 320VDC	PIN 11 135VDC	PIN 12 6.3VAC				

PHONO AUDIO SWITCH OFF
PICTURE TUBE FILAMENT SWITCH ON
HORIZONTAL CENTERING CONTROL COUNTER CLOCKWISE
FOCUS CONTROL COUNTER CLOCKWISE
§ TAKEN WITH VACUUM TUBE VOLTMETER
¶ 6.3VAC MEASURED ACROSS FILAMENTS
* DO NOT MEASURE

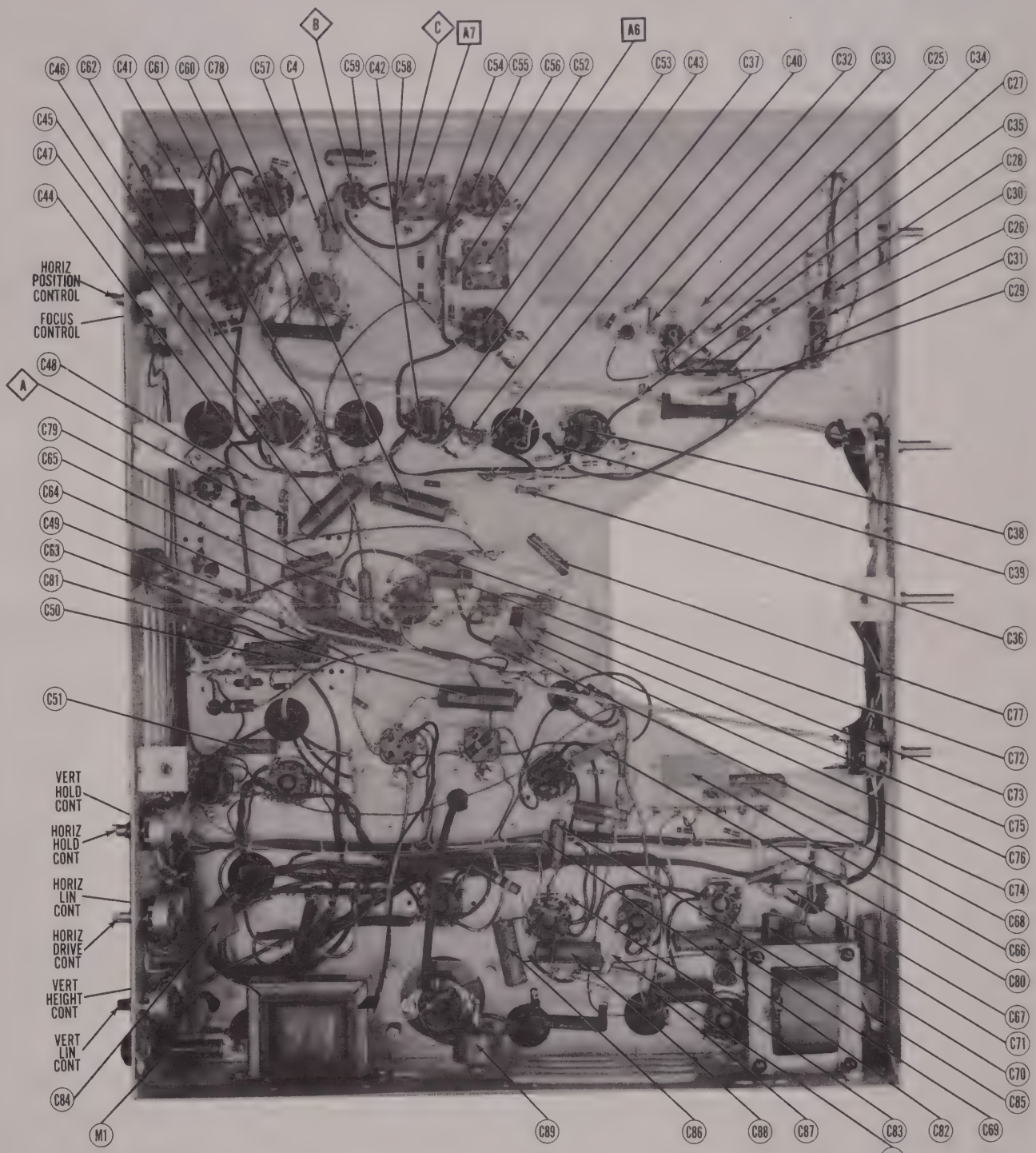
RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6AG5	3.6Meg	82Ω	.1Ω	0Ω	†20KΩ	†58KΩ	82Ω		
V 2	6AK5	1Meg	0Ω	0Ω	.1Ω	†43KΩ	†160KΩ	0Ω		
V 3	6AB4	†20KΩ	Inf.	0Ω	.1Ω	Inf.	12KΩ	0Ω		
V 4	6AG5	2.3Meg	47Ω	0Ω	.1Ω	†12KΩ	†68KΩ	47Ω		
V 5	6AC7	0Ω	0Ω	0Ω	2.3Meg	100Ω	†57KΩ	.1Ω	†830Ω	
V 6	6AC7	0Ω	0Ω	0Ω	3.2Meg	100Ω	†56KΩ	.1Ω	†680Ω	
V 7	6AC7	0Ω	0Ω	0Ω	.1Ω	150Ω	†56KΩ	.1Ω	†530Ω	
V 8	6AL5	.2Ω	1Meg	0Ω	.1Ω	0Ω	0Ω	4.7KΩ		
V 9	6AG7	0Ω	0Ω	0Ω	4.7KΩ	900Ω	†40KΩ	.1Ω	†3.7KΩ	
V 10	6AC7	0Ω	0Ω	0Ω	1Meg	47Ω	†100KΩ	.1Ω	†530Ω	
V 11	6AC7	0Ω	0Ω	0Ω	.1Ω	150Ω	†100KΩ	.1Ω	†2.7KΩ	
V 12	6AL5	Inf.	Inf.	0Ω	.1Ω	0Ω	0Ω	56KΩ		
V 13	6SL7GT	3.3Meg	†245KΩ	0Ω	0Ω	†245KΩ	3.3KΩ	.1Ω	0Ω	
V 14	6V6GT	0Ω	0Ω	†1.7KΩ	†1.4KΩ	470KΩ	1Meg	.1Ω	390Ω	
V 15	6SN7GT	1Meg	†40KΩ	0Ω	Inf.	†380Ω	10KΩ	.1Ω	0Ω	
V 16	6SN7GT	470KΩ	†22KΩ	1KΩ	470KΩ	†5.1KΩ	4.7KΩ	.1Ω	0Ω	
V 17	6SN7GT	680KΩ 1.7Meg	†1Meg †1.5Meg	0Ω	680KΩ 1.7Meg	†100KΩ	0Ω	.1Ω	0Ω	
V 18	6V6GT	Inf.	.1Ω	†1.5KΩ	†1.5KΩ	1Meg	Inf.	0Ω	5KΩ 0Ω	
V 19	6AL5	Inf.	Inf.	0Ω	.1Ω	100KΩ	0Ω	100KΩ		
V 20	6SN7GT	60KΩ 100KΩ	†340KΩ	0Ω	60KΩ 100KΩ	†100KΩ	0Ω	0Ω	.1Ω	
V 21	6BG6G	Inf.	0Ω	68Ω	†56KΩ	1Meg	†56KΩ	.1Ω	†10KΩ	TOP CAP ▲135Ω
V 22	6X5GT	Inf.	Inf.	†70Ω	†65Ω	†70Ω	Inf.	Inf.	Inf.	
V 23	1B3GT	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	TOP CAP ▲565Ω
V 24	5U4G	Inf.	25KΩ	Inf.	30Ω	Inf.	30Ω	Inf.	25KΩ	
V 25	5U4G	Inf.	25KΩ	Inf.	30Ω	Inf.	30Ω	Inf.	25KΩ	
V 26	PIX TUBE	0Ω	0Ω	PIN 10 †380Ω	PIN 11 60KΩ	PIN 12 .1Ω				

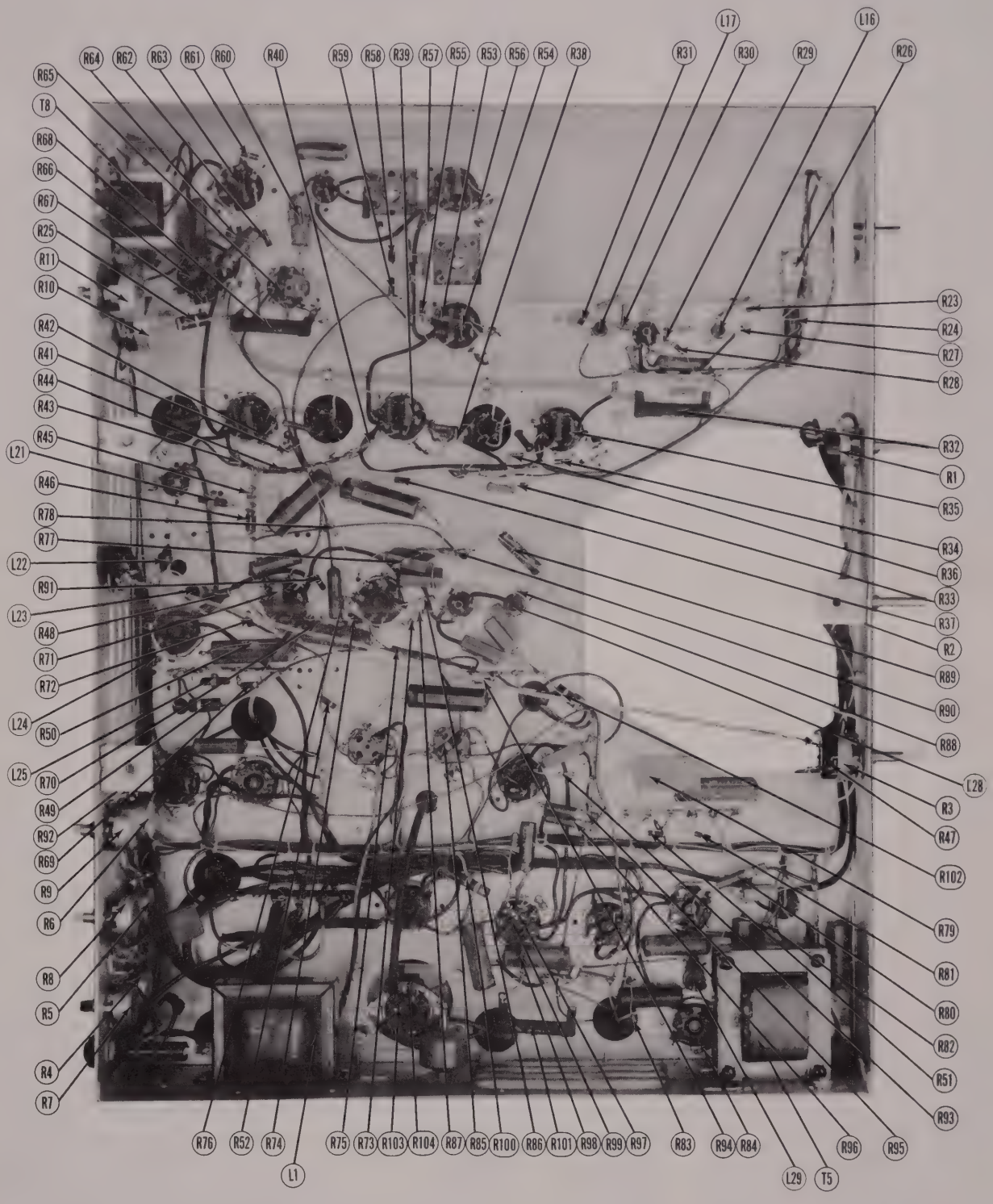
PHONO AUDIO SWITCH OFF
PICTURE TUBE FILAMENT SWITCH ON
HORIZONTAL CENTERING CONTROL COUNTER CLOCKWISE
FOCUS CONTROL COUNTER CLOCKWISE
† MEASURED FROM PIN 8 OF V25
▲ MEASURED FROM PIN 8 OF V22.
ALL MEASUREMENTS TAKEN WITH PICTURE TUBE REMOVED.

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltage measured at 1,000 ohms.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. Front panels controls set at minimum.
6. Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.

PROPERTY OF
L. F. BLANKENSHIP
3644 MEADE ST.
DENVER, COLORADO

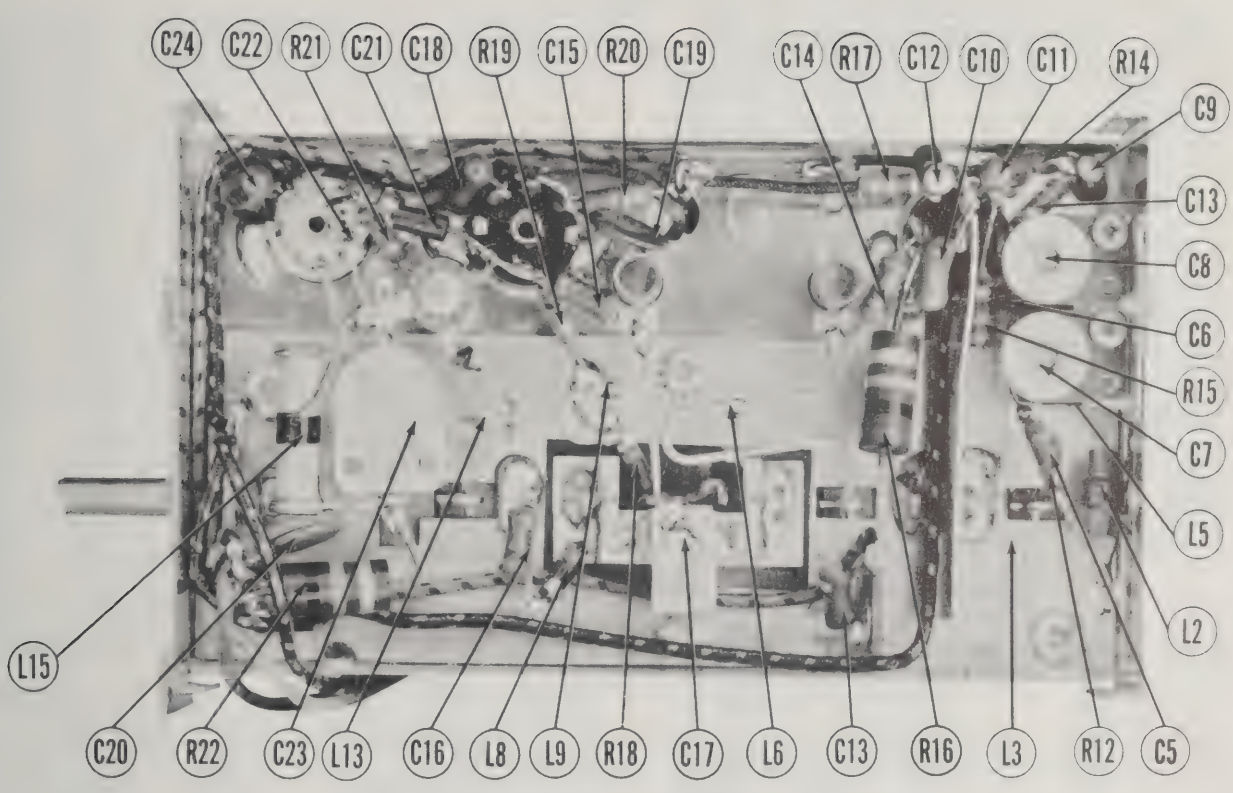


CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION



PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION



RF TUNER

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably a test pattern.

Turn the horizontal hold control to synchronize the picture horizontally.

Adjust the horizontal drive control counter-clockwise as far as possible without crowding in the picture.

If a fold over occurs in the picture that cannot be removed by adjusting the drive control, adjust the horizontal phase slug (B1). Otherwise leave B1 at approximately the center of its range.

Turn the horizontal linearity slug (B2) all the way in.

Adjust the horizontal linearity control until the picture is symmetrical from left to right. If proper linearity in the right hand portion cannot be obtained with the control. Adjust B2 to correct the non-linearity.

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: TRANSVISION PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	8MA BASE TYPE	NOTES
V1	RF Amplifier		6AG5	7BD	
V2	Mixer		6AK5	7BD	
V3	Oscillator		6AB4	5CE	
V4	1st Video IF Amp.		6AG5	7BD	
V5	2nd Video IF Amp.		6AC7	8N	
V6	3rd Video IF Amp.		6AC7	8N	
V7	4th Video IF Amp.		6AC7	8N	
V8	Video Detector - AGC-Sync. Clipper		6AL5	6BT	
V9	Video Amplifier		6AG7	8T	
V10	1st Sound IF Amp.		6AC7	8N	
V11	2nd Sound IF Amp.		6AC7	8N	
V12	Ratio Detector		6AL5	6BT	
V13	AF Amplifier - Phono Amplifier	6SL7GT	6SL7GT	8BD	
V14	Audio Output	6V6GT	6V6GT	7AC	
V15	Sync. Separator - Horizontal AFC	6SN7GT	6SN7GT	8BD	
V16	Sync. Amplifier	6SN7GT	6SN7GT	8BD	
V17	Vert. Oscillator - Vert. Discharge	6SN7GT	6SN7GT	8BD	
V18	Vert. Output	6V6GT	6V6GT	7AC	
V19	Horiz. Phase Det.	6AL5	6AL5	6BT	
V20	Horiz. Oscillator - Horiz. Discharge	6SN7GT·	6SN7GT	8BD	
V21	Horiz. Output	6BG6G	6BG6G	5BT	
V22	Damper	6X5GT	6X5GT	6S	
V23	H. V. Rectifier	1B3GT	1B3GT	9C	
V24	L. V. Rectifier	5U4G	5U4G	5T	
V25A	L. V. Rectifier	5U4G	5U4G	5T	
B	L. V. Rectifier	6X5GT	6X5GT	6S	
V26	Picture Tube	Optional		12D	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP	RATING: VOLT	REPLACEMENT DATA: TRANSVISION PART No.	REPLACEMENT DATA: AEROVOX PART No.	REPLACEMENT DATA: CENTRALAB PART No.	REPLACEMENT DATA: CORNELL DUBILIER PART No.	REPLACEMENT DATA: ERIE PART No.	REPLACEMENT DATA: SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1A	30	475	90	AFH862J4A		UPT33250		TVL-3840	■ Filter
B	30	475				BR202A		TVA-1205	▲ Filter
C	10	475							▲ V. Amp. Screen
D	20	25							Vert. Output Cathode
C2A	30	475	90	AFH862J4A		UPT33250		TVL-3840	■ Filter
B	30	475				BR202A		TVA-1205	▲ Filter
C	10	475							▲ Vert. Output Dec.
D	20	25							Vert. Output Cathode
C3A	30	475	90	AFH862J4A		UPT33250		TVL-3840	■ Filter
B	30	475				BR202A		TVA-1205	▲ Decoupling
C	10	475							▲ Decoupling
D	20	25							Output Cathode
C4	4	50	230	PRS150/4		BR550		TVA-1303	Stabilizing Cap
C5	2.5				TCZ-2.2				RF Coupling
C6	[illegible]				TCZ-30		NPOK-30		Fixed Trimmer
C7	8-50						557-N750-8-50		Variable Trimmer
C8	3-12						557-NPO-3-12		Variable Trimmer
C9	470			S1470		D6-471	GP2K-470	19C15	AGC Filter
C10	470			S1470		D6-471	GP2K-470	19C15	RF Amp. Fil.
C11	470			S1470		D6-471	GP2K-470	19C15	RF Amp. Cathode
C12	470			S1470		D6-471	GP2K-470	19C15	RF Amp. Screen
C13	470			S1470		D6-471	GP2K-470	19C15	RF Bypass
C14	[illegible]			SL100		D6-101	GP1K-100	19C11	RF Coupling
C15	[illegible]			SL100		D6-101	GP1K-100	19C11	RF Coupling
C16	[illegible]			SL100		D6-101	GP1K-100	19C11	Fixed Trimmer
C17	125								Fixed Trimmer
C18	470			S1470		D6-471	GP2K-470	19C15	Mixer Filament
C19	5000			BPD-005		DD-502	811-005	29C1	Mixer Screen
C20	5000			BPD-005		DD-502	811-005	29C1	RF Bypass
C21	1					TCZ-1			Osc. Coupling
C22	[illegible]			S15NPO		TCZ-4.7	NPOK-5		Osc. Grid Cap
C23	2-12						TS2A-N500-2-12		Variable Trimmer
C24	470			S1470		D6-471	GP2K-470	19C15	Osc. Filament
C25	7.5			S1B 2NPO			NPOK-8.2		Fixed Trimmer
C26	2000		76	SI2000		D6-202	GP2L-002	29C2	Mixer Plate Dec.
C27	150		72	SI150		D6-151	GP2K-150	19C12	IF Coupling
C28	.01	600	79	P688-01		D6-103	PTE6S1	82I-01	AGC Coupling
C29	2000		76	SI2000		D6-202	GP2M-002	29C2	AGC Filter
C30	2000		76	SI2000		D6-202	GP2M-002	29C2	AGC Filter
C31	.01	600	79	P688-01		D6-103	PTE6S1	82I-01	RF Bypass
C32	2000		76	SI2000		D6-202	GP2L-002	29C2	1st V. IF Dec.
C33	2000		76	SI2000		D6-202	GP2L-002	29C2	1st V. IF Screen
C34	2000		76	SI2000		D6-202	GP2L-002	29C2	1st V. IF Fil.
C35	150		72	SI150		D6-151	GP1K-150	19C12	IF Coupling
C36	2000		76	SI2000		D6-202	GP2L-002	29C2	AGC Filter
C37	2000		76	SI2000		D6-202	GP2L-002	29C2	2nd V. IF Dec.
C38	2000		76	SI2000		D6-202	GP2L-002	29C2	2nd V. IF Screen
C39	2000		76	SI2000		D6-202	GP2L-002	29C2	2nd V. IF Fil.
C40	150		72	SI150		D6-151	GP1K-150	19C12	IF Coupling
C41	2000		76	SI2000		D6-202	GP2L-002	29C2	3rd V. IF Dec.
C42	2000		76	SI2000		D6-202	GP2L-002	29C2	3rd V. IF Screen
C43	2000		76	SI2000		D6-202	GP2L-002	29C2	3rd V. IF Cathode
C44	2000		76	SI2000		D6-202	GP2L-002	29C2	4th V. IF Dec.
C45	2000		76	SI2000		D6-202	GP2L-002	29C2	4th V. IF Screen
C46	2000		76	SI2000		D6-202	GP2L-002	29C2	4th V. IF Cathode
C47	.1	600	80	P688-1		DF-104	PTE6P1	6TM-P1	AGC Filter
C48	7.5		560	SI0		D6-100	5W5Q1	GP1K-10	19C3	V. Diode Filter
C49	50			SI50		D6-500	5W5Q5	GP1K-50	19C28	Fixed Trimmer
C50	.1	600	80	P688-1		DF-104	PTE6P1	6TM-P1	Video Coupling
C51	.01	600	79	P688-01		D6-103	PTE6S1	82I-01	6TM-S1	Vert. Sweep Coupling
C52	2000		76	SI2000		D6-202	1W5D2	GP2L-002	29C2	1st S. IF Dec.
C53	2000		76	SI2000		D6-202	1W5D2	GP2L-002	29C2	1st S. IF Screen
C54	2000		76	SI2000		D6-202	1W5D2	GP2L-002	29C2	2nd S. IF Dec.
C55	2000		76	SI2000		D6-202	1W5D2	GP2L-002	29C2	2nd S. IF Screen

CAPACITORS (CONT.)

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: TRANSVISION PART No.	REPLACEMENT DATA: AEROVOX PART No.	REPLACEMENT DATA: CENTRALAB PART No.	REPLACEMENT DATA: CORNELL-DUBILIER PART No.	REPLACEMENT DATA: ERIE PART No.	REPLACEMENT DATA: SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C56	2000		76	SI2000	D6-202	1W5D2	GP2L-002	29C2	2nd S. IF Cathode
C57	150		72	SI150	D6-151	5W5T15	GP2K-150	19C12	RF Bypass
C58	1500		76	SI1500	D6-152	1W5D15	GP2L-0015	29C9	De-emphasis †
C59	.01	600	79	P688-01	D6-103	PTE6S1	82I-01	6TM-S1	Audio Coupling
C60	.01	600	79	P688-01	D6-103	PTE6S1	82I-01	6TM-S1	Audio Coupling
C61	.01	600	79	P688-01	D6-103	PTE6S1	82I-01	6TM-S1	Audio Coupling
C62	.01	600	79	P688-01	D6-103	PTE6S1	82I-01	6TM-S1	Output Plate
C63	.005	600	77	P688-005	D6-502	PTE6D5	811-005	6TM-D5	Sync. Coupling
C64	.047	600	74	P688-047	DF-503	PTE6S5		6TM-S47	Sync. Coupling
C65	.005	600	77	P688-005	D6-502	PTE6D5	811-005	6TM-D5	Sync. Coupling
C66A	10000		*1259	P688-01	PC-101	PTE6S1	82I-01	6TM-S1	Vert. Sync. Coupling
B	2000			P688-002		PTE6D2	GP2M-002	6TM-D2	Integrator Net
C	5000			P688-005		PTE6D5	811-005	6TM-D5	Integrator Net
D	5000			P688-005		PTE6D5	811-005	6TM-D5	Integrator Net
C67	5000	500	7.7	1467-005	D6-502	1D5D5	811-005	1FM-25	Vert. Osc. Grid
C68	.1	600	80	P688-1	DF-104	PTE6P1		6TM-P1	Vert. Osc. Dec.
C69	.047	600	74	P688-047		PTE6S5		6TM-S47	Vert. Discharge
C70	.1	600	80	P688-1	DF-104	PTE6P1		6TM-P1	Vert. Sweep Coupling
C71	.047	600	74	P688-047	DF-503	PTE6S5		6TM-S47	Fixed Trimmer
C72	510	500	73	1468-0005	D6-501	5W5T5	GP2K-510	1FM-35	Horiz. Sync. Coupling
C73	510	500	73	1468-0005	D6-501	5W5T5	GP2K-510	1FM-35	Horiz. Sync. Coupling
C74	510	500	73	1468-0005	D6-501	5W5T5	GP2K-510	1FM-35	Horiz. Feedback
C75	510	500	73	1468-0005	D6-501	5W5T5	GP2K-510	1FM-35	Horiz. Feedback
C76	1000	500	85	1467-001	D6-102	1W5D1	GP2L-001	1FM-21	Horiz. Feedback
C77	.005	600	1150	P688-005	D6-502	PTE6D5	811-005	6TM-D5	AFC Filter
C78	.1	600	80	P688-1	DF-104	PTE6P1		6TM-P1	AFC Filter
C79	.01	600	79	P688-01	D6-103	PTE6S1	82I-01	6TM-S1	AFC Filter
C80	510	500	73	1468-0005	D6-501	5W5T5	GP2K-510	1FM-25	Horiz. Osc. Grid
C81	.1	600	80	P688-1	DF-104	PTE6P1		6TM-P1	Horiz. Osc. Dec.
C82	150		72	SI150	D6-151	5W5T15	GP2K-150	19C12	Horiz. Discharge
C83	150		72	SI150	D6-151	5W5T15	GP2K-150	19C12	Horiz. Discharge
C84	1000	500	85	1467-001	D6-102	1W5D1	GP2L-001	1FM-21	Horiz. Discharge
C85	.01	600	79	P688-01	D6-103	PTE6S1	82I-01	6TM-S1	Horiz. Sweep Coupling
C86	.047	600	74	P688-047	DF-503	PTE6S5		6TM-S47	Horiz. Output Screen
C87	.03	600	841	P688-03		PTE6S3		6TM-S3	Damper Filter
C88	.047	500	74	P688-047		PTE6S5		6TM-S47	Damper Filter
C89	500	20000	330	HV20B	TV2-502				H. V. Filter

† Some models use 2000MMF in this application.
* Items C66A, C66B, C66C, C66D, R79A, R79B, R79C and R79D are combined into one unit.

CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: Transvision PART No.	REPLACEMENT DATA: IRC PART No.	REPLACEMENT DATA: CLAROSTAT PART No.	REPLACEMENT DATA: CENTRALAB PART No.	INSTALLATION NOTES
R1A	1Meg	½	38	Q13-137	AG-63-Z	B-70-8	Volume Control
B	Shaft		Not req.	Not req.	FS-3	Not req.	Attach to R1A Per Instructions
C	Switch		Not req.	76-1	SWB	Not req.	Attach to R1A Per Instructions
R2A	100KΩ	½	238	Q11-128	AG-49-S	B-40-8	Brightness Control
B	Shaft		Not req.	Not req.	FS-3	Not req.	Attach to R2A Per Instructions
C	Switch		Not req.	76-1	SWB	Not req.	Attach to R2A Per Instructions
R3A	10KΩ	½	1149		AG-30-V		Contrast Control
B	Shaft		Not req.		FS-3		Attach to R3A Per Instructions
C	Switch		Not req.		SWB-1		Attach to R3A Per Instructions
R4A	2Meg	½	37	Q11-139	AG-63-S	AN-75	Height Control
B	Shaft		Not req.	Not req.	FKS-1/4	AK-1	Attach to R4A Per Instructions
R5A	5000Ω	½	373	Q11-114	AG-19-S	AN-10	Horizontal Linearity Control
B	Shaft		Not req.	Not req.	FKS-1/4	AK-1	Attach to R5A Per Instructions
R6A	1Meg	½	374	Q11-137	AG-61-S	AN-89	Vertical Hold Control
B	Shaft		Not req.	Not req.	FKS-1/4	AK-1	Attach to R6A Per Instructions
R7A	5000Ω	½	373	Q11-114	AG-19-S	AN-10	Vertical Linearity Control
B	Shaft		Not req.	Not req.	FKS-1/4	AK-1	Attach to R7A Per Instructions
R8A	100KΩ	½	36	Q11-128	AG-49-S	AN-40	Horizontal Drive Control
B	Shaft		Not req.	Not req.	FKS-1/4	AK-1	Attach to R8A Per Instructions
R9A	100KΩ	½	36	Q11-128	AG-49-S	AN-40	Horizontal Hold Control
B	Shaft		Not req.	Not req.	FKS-1/4	AK-1	Attach to R9A Per Instructions
R10	2000Ω	4			RTV-9	SVP-987	Focus Control - Wire Wound
R11	25Ω	4			RTV-19	SVP-982	Horizontal Centering Control - Wire Wound

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: TRANSVISION PART No.	REPLACEMENT DATA: IRC PART No.	IDENTIFICATION CODES ALL RESISTORS ± 10% UNLESS OTHERWISE SPECIFIED
R12	12KΩ	½			Antenna Loading
R13	2200Ω	½		BTS-2200	RF Amp. Grid
R14	1.2Meg	½		BTS-1.2Meg	AGC Network
R15	82Ω	3		BTS-82	RF Amp. Cathode
R16	10KΩ	2			RF Amp. Plate
R17	47KΩ	½			RF Amp. Screen
R18	12KΩ	½			Mixer Grid Coil Shunt
R19	1Meg	½			Mixer Grid
R20	150KΩ	½			Mixer Screen
R21	12KΩ	½			Osc. Grid
R22	10KΩ	2			Osc. Plate
R23	22KΩ	½			Mixer Plate
R24	10KΩ	2			Mixer Plate Decoupling
R25	470Ω	2		BTB-470	Focus Coil Shunt - See Note 1
R26	100KΩ	½	56	BTS-100K	AGC Network
R27	100KΩ	½	56	BTS-100K	AGC Network
R28	68000Ω	½	49		1st Video IF Amp. Grid
R29	47Ω	½	337		1st Video IF Amp. Cathode
R30	56KΩ	½	54		1st Video IF Amp. Screen
R31	1000Ω	½	45	BTS-1000	1st Video IF Amp. Decoupling
R32	10KΩ	10	344	1 3/4A-10K	Decoupling - Wire Wound
R33	100KΩ	½	56	BTS-100K	AGC Network
R34	10KΩ	½	50	BTS-10K	2nd Video IF Amp. Grid
R35	100Ω	½	41	BTS-100	2nd Video IF Amp. Cathode
R36	56KΩ	½	54		2nd Video IF Amp. Screen
R37	150Ω 20%	½	42	BTS-150	Decoupling
R38	1Meg	½	60		3rd Video IF Amp. Grid
R39	100Ω 20%	½	41	BTS-100	3rd Video IF Amp. Cathode
R40	56KΩ	½	54		3rd Video IF Amp. Screen
R41	150Ω	½	42	BTS-150	Decoupling
R42	150Ω	½	42	BTS-150	4th Video IF Amp. Cathode
R43	56KΩ	½	54		4th Video IF Amp. Screen
R44	150Ω	½	42	BTS-150	Decoupling

RESISTORS (CONT.)

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: TRANSVISION PART No.	REPLACEMENT DATA: IRC PART No.	IDENTIFICATION CODES
R45	4700Ω	½	48	BTS-4700	Video Det. Diode Load
R46	2.2Meg	½		BTS-2.2Meg	AGC Network
R47	1000Ω	½	45	BTS-1000	Contrast Control Shunt
R48	47KΩ	1	94	BTA-47K	Video Amp. Screen
R49	3300Ω	2	643	BTB-3300	Video Amp. Plate
R50	100KΩ	½	56	BTS-100K	Voltage Divider
R51	100KΩ 20%	½	56	BTS-100K	Voltage Divider
R52	100KΩ 20%	½	56	BTS-100K	Picture Tube Grid
R53	1Meg	½	60		Sound IF Amp. Grid
R54	47Ω	½	337		Sound IF Amp. Cathode
R55	100KΩ 20%	½	56		Sound IF Amp. Screen
R56	150Ω	½	42	BTS-150	Limiter Cathode
R57	100KΩ 20%	½	56		Limiter Screen
R58	2200Ω	½	46	BTS-2200	Limiter Decoupling
R59	150Ω	½	42	BTS-150	Decoupling
R60	56KΩ	½	54	BTS-56K	Ratio Det. Diode Load
R61	3.3Meg	½	62	BTS-3.3Meg	1st AF Amp. Grid
R62	220KΩ	½	57	BTS-220K	1st AF Amp. Plate
R63	3300Ω	½	47	BTS-3300	2nd AF Amp. - Phono Pre-Amp. Cathode
R64	220KΩ	½	57	BTS-220K	2nd AF Amp. - Phono Pre-Amp. Plate
R65	22KΩ 20%	1		BTA-22K	Decoupling
R66	470KΩ	½	59	BTS-470K	Output Grid
R67	390Ω	½	43	BTS-390	Output Cathode
R68	1000Ω	10	343	1 3/4A-1000	Decoupling - Wire Wound
R69	3200Ω	½	46	BTS-3200	Isolation
R70	1Meg	½	60	BTS-1Meg	Sync. Clipper Load - 1st Sync. Amp. Grid
R71	100KΩ	½	56	BTA-100K	1st Sync. Amp. Plate
R72	18KΩ	½		BTS-18K	Voltage Divider
R73	470KΩ	½	59	BTS-470K	2nd Sync. Amp. Grid
R74	1000Ω	½	45	BTS-1000	2nd Sync. Amp. Cathode
R75	22KΩ 20%	1		BTA-22K	2nd Sync. Amp. Plate
R76	470KΩ	½	59	BTS-470K	2nd Sync. Amp. Grid
R77	4700Ω	½	48	BTS-4700	2nd Sync. Amp. Cathode
R78	4700Ω	½	48	BTS-4700	2nd Sync. Amp. Plate
R79A	22KΩ	½	1259 *	BTS-22K	Voltage Divider
B	22KΩ	½		BTS-22K	Integrator
C	8200Ω	½		BTS-8200	Integrator
D	8200Ω	½		BTS-8200	Integrator
R80	680KΩ	½		BTS-680K	Vertical Osc. Grid - See Note 2
R81	100KΩ 20%	½	56	BTS-100K	Vertical Osc. Plate
R82	1Meg	½	60	BTS-1Meg	Vertical Discharge Plate
R83	3300Ω	½	47	BTS-3300	Vertical Peaking - See Note 3
R84	1Meg	½	60	BTS-1Meg	Vertical Output Grid
R85	470Ω	1	641	BTA-470	Vertical Output Decoupling
R86	100KΩ	½	56	BTS-100K	Horizontal Phase Det. Diode Load
R87	100KΩ	½	56	BTS-100K	Horizontal Phase Det. Diode Load
R88	4700Ω	½	48	BTS-4700	Horizontal Phase Coil Shunt
R89	470KΩ	½	59	BTS-470K	Horizontal AFC Filter
R90	4700Ω	½	48	BTS-4700	Horizontal AFC Filter
R91	10KΩ	½	50	BTS-10K	Horizontal AFC Cathode
R92	56KΩ	½	54	BTS-56K	Horizontal Hold Control Shunt
R93	47KΩ	½		BTS-47K	Horizontal Osc. Grid - See Note 4
R94	100KΩ 20%	½	56	BTS-100K	Horizontal Osc. Plate
R95	680KΩ	2	1005	BTB-680K	Horizontal Discharge Plate
R96	680KΩ	2	1005	BTB-680K	Horizontal Discharge Plate
R97	56KΩ	½	54	BTS-56K	Horizontal Peaking
R98	100Ω 20%	½	41		Parasitic Suppressor
R99	1Meg	½	60	BTS-1Meg	Horizontal Output Grid
R100	68Ω	2		BW-2-68	Horizontal Output Cathode
R101	10KΩ	10	344	1 3/4A-10K	Horizontal Output Screen
R102	47KΩ	2	1004	BTB-47K	Horizontal Feedback Network
R103	3.3Ω	1	335		H. V. Rectifier Filament
R104	100KΩ	1	66	BTA-100K	H. V. Filter

* Items R79A, R79B, R79C, R79D, C66A, C66B, C66C and C66D are combined into one unit.

Note 1. Some models use 510Ω resistor in this application.
Note 2. Some models use 1Meg resistor in this application.
Note 3. Some models use 4700Ω resistor in this application.
Note 4. Some models use 56KΩ resistor in this application.

TRANSFORMER (POWER)

ITEM No.	RATING: PRI.	RATING: SEC. 1	RATING: SEC. 2	RATING: SEC. 3	REPLACEMENT DATA: TRANSVISION PART No.	REPLACEMENT DATA: STANCOR PART No.	REPLACEMENT DATA: MERIT PART No.	REPLACEMENT DATA: CHICAGO PART No.
T1	117VAC @2.55A	750VCT .290ADC	5VAC @ 6A	6.3VAC ① .6A SEC. 4 6.3VAC @9.2A				

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING: DC RESISTANCE PRI.	RATING: DC RESISTANCE SEC.	REPLACEMENT DATA: TRANSVISION PART No.	REPLACEMENT DATA: STANCOR PART No.	REPLACEMENT DATA: MERIT PART No.	REPLACEMENT DATA: CHICAGO PART No.	NOTES
T2	8Ω	3.6Ω	307	A-8120	A-4002		Horizontal Block Osc.
T3	205Ω	1080Ω	306	A-8121	A-4000	TB0-3	Vertical Block Osc.
T4	530Ω Tap 98Ω	15.3Ω Taps .6Ω & 10.6Ω SEC. 2 9Ω	1279				Horizontal Output Trans.
T5	560Ω	7Ω	1275	A-8115 ①	A-3036 ①	TS0-1 ①	Vertical Output Trans.
T6A	19.5Ω		1263	DY-7			Horizontal Deflection Coil
B	67Ω						Vertical Deflection Coil
T7	400Ω		309	FC-10	MF-3		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING: IMPEDANCE PRI.	RATING: IMPEDANCE SEC.	RATING: DC RES. PRI.	RATING: DC RES. SEC.	REPLACEMENT DATA: TRANSVISION PART No.	REPLACEMENT DATA: STANCOR PART No.	REPLACEMENT DATA: MERIT PART No.	REPLACEMENT DATA: CHICAGO PART No.	INSTALLATION NOTES
T8	4.2KΩ	3.1Ω	265Ω	.8Ω	21	A-3877	A-2930	RO-9	

TRANSVISION CHASSIS A-3

PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
	FIELD RES.	V. C. IMP.	TRANSVISION PART No.	VIKING PART No.	QUAM PART No.	
SP1	3.1Ω	3Ω	666	69J9	69A2	
	CONE DIA.	V. C. DIA.				
SP2	6"X9"	9/16"				

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 ~)	Transvision PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L1	.300A	55Ω	2.3 Henries	304	C-2326	C-2991	TR3300	

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	TRANSVISION PART No.	MEISSNER PART No.	
L2	Ant. Trans.	0Ω	0Ω			L2 Through L15 Part of Tuner (Part #1191)
L3	Ant. Coil End Inductor	0Ω				
L4	Ant. Coil	0Ω				
L5	Ant. Loading Coil	0Ω				
L6	RF Coil End Inductor	0Ω				
L7	RF Coil	0Ω				
L8	Band Pass Coil	.1Ω				
L9	Mixer Grid Coil End Inductor	0Ω				
L10	Mixer Grid Coil	0Ω				
L11	Band Pass Coil					Not used in all Models
L12	Band Pass Coil					Not used in all Models
L13	Osc. Coil End Inductor	0Ω				
L14	Osc. Coil	0Ω				
L15	Osc. Coil Shunt	0Ω				
L16	1st Video IF	.3Ω		1376		4.85 - 13 Microhenries
L17	2nd Video IF	.2Ω		603		
L18	3rd Video IF-Sound Take - Off	.2Ω		175		
L19	4th Video IF	.2Ω	.1Ω	174		
L20	5th Video IF	.2Ω	.2Ω	176		
L21	Peaking	7.9Ω		16	19-1922	250 Microhenries (Green Dot)
L22	Peaking	5.2Ω		17	19-1921	125 Microhenries (Blue Dot)
L23	4.5MC Trap	1.4Ω		1155		
L24	Peaking	6.5Ω		654	19-1922 ①	200 Microhenries (Wound on 22KΩ Resistor)
L25	Peaking	5.2Ω		17	19-1921	125 Microhenries (Blue Dot)
L26	Sound IF	.1Ω	.1Ω	318		
L27	Ratio Det. Trans.	.1Ω	.1Ω	317		
L28	Horiz. Lin.	35Ω		377		
L29	Horiz. Lin.	35Ω		377		

① Parallel with 22KΩ. Resistor.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				REMARKS
			TRANSVISION PART No.		LITTELFUSE PART No.		
			FUSE	HOLDER	FUSE	HOLDER	
M1	3AG	5A	1298	600	312005	341001	
M2	3AG	.250	931		318.250		

DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					TRANSVISION PART No.		
M3	Bayonet	6-8	.2	White			Type #51

MISCELLANEOUS

ITEM No.	PART NAME	TRANSVISION PART No.	NOTES
M4A	RF Tuner	1191	Complete with Tubes (Dumont)
B	RF Tuner	1281	Complete with Tubes (Sarkies Tarzian TT-4)
M5A	Ion Trap	1183	
B	Ion Trap	1367	Alternate
	Escutcheon	1193	Gold Color for Dumont Dial
	Knob	106	Includes Set Screw For Dumont Tuner
	Knob	631	Outer for Sarkies Tarzian Tuner
	Knob	1282	Pointer
	Dial	1280	Metal

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